

General Information

Mission Information

Project name	15316
Processing date	2022-09-19 13:50:23
Mission date	2022-09-18 17:14:37
Mission duration	01:59:00.768
Processing mode	IN-Fusion PP-RTX

Rover Hardware Information

Product	POS AV 610 VER6 HW2.5-12
Serial number	S/N7881
IMU type	57
Receiver type	BD982
Antenna type	AV39

Project File List

Rover Data Files

File name	File type
20220918N223SC.000	POS Data
20220918N223SC.001	POS Data
20220918N223SC.002	POS Data
20220918N223SC.003	POS Data
20220918N223SC.004	POS Data
20220918N223SC.005	POS Data
20220918N223SC.006	POS Data
20220918N223SC.007	POS Data
20220918N223SC.008	POS Data
20220918N223SC.009	POS Data
20220918N223SC.010	POS Data
20220918N223SC.011	POS Data
20220918N223SC.012	POS Data
20220918N223SC.013	POS Data
20220918N223SC.014	POS Data
20220918N223SC.015	POS Data
20220918N223SC.016	POS Data

Input Files

File Name	File Type
Ephm2610.22g	GLONASS Broadcast Ephemeris
Ephm2610.22n	GPS Broadcast Ephemeris

Output Files

Filename	File type
sbet_15316.out	SBET Trajectory File
event1_eo_15316.txt	ZI Imaging POSEO Output
sbet_15316_NAD83(2011).out	Custom Smoothed BET Export Output

Rover Data Summary

First raw data file	20220918N223SC.000		
Last raw data file	20220918N223SC.016		
Start GPS week	2228		
Start time	62076.843 (09/18/2022 17:14:36)		
End time	69217.611 (09/18/2022 19:13:37)		
Start of fine alignment	62409.289 (09/18/2022 17:20:09)		
Available subsystems	Primary GNSS, Gimbal, IMU		
POS Event Input	Event 1 Input		
Correction data	None		
IMU Installation Lever Arms & Mounting Angles			
Gimbal to IMU lever arm (m)	-0.229	-0.010	-0.133
Gimbal to IMU mounting angles (deg)	0.000	0.000	180.000
Gimbal to Primary GNSS lever arm (m)	0.126	-0.066	-1.071
Gimbal to Primary GNSS lever arm std dev (m)	-1.000		
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

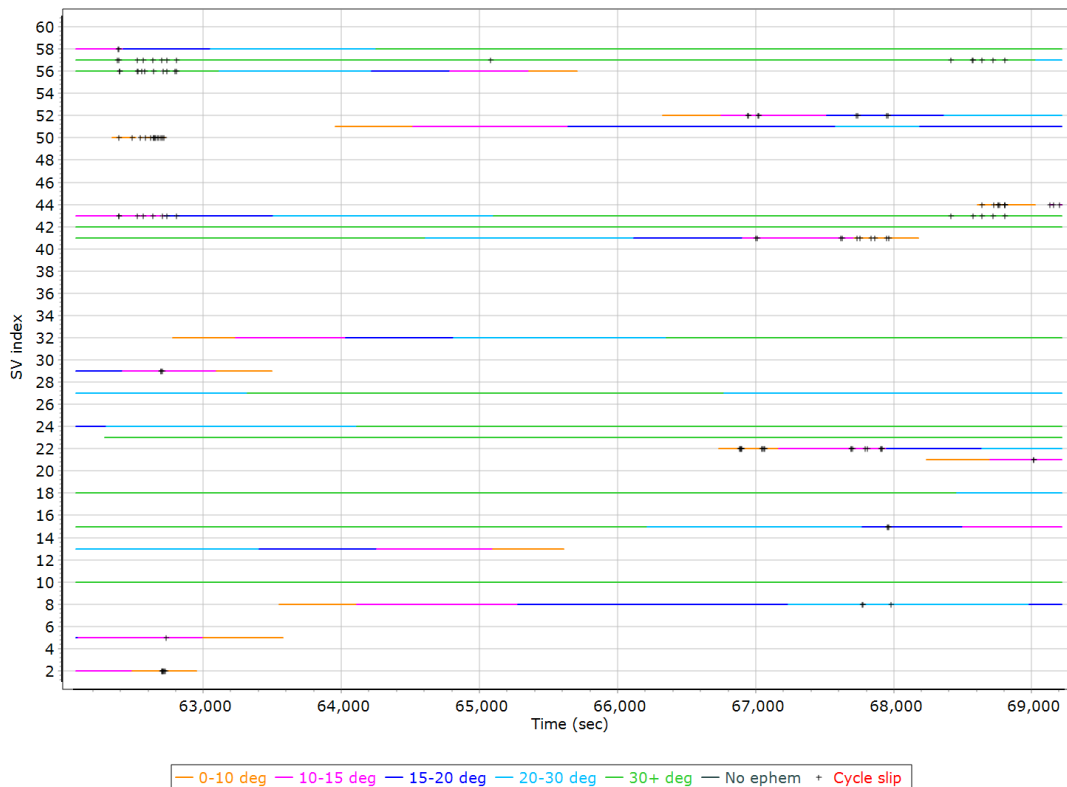
Rover Data QC

Raw IMU Import QC Summary

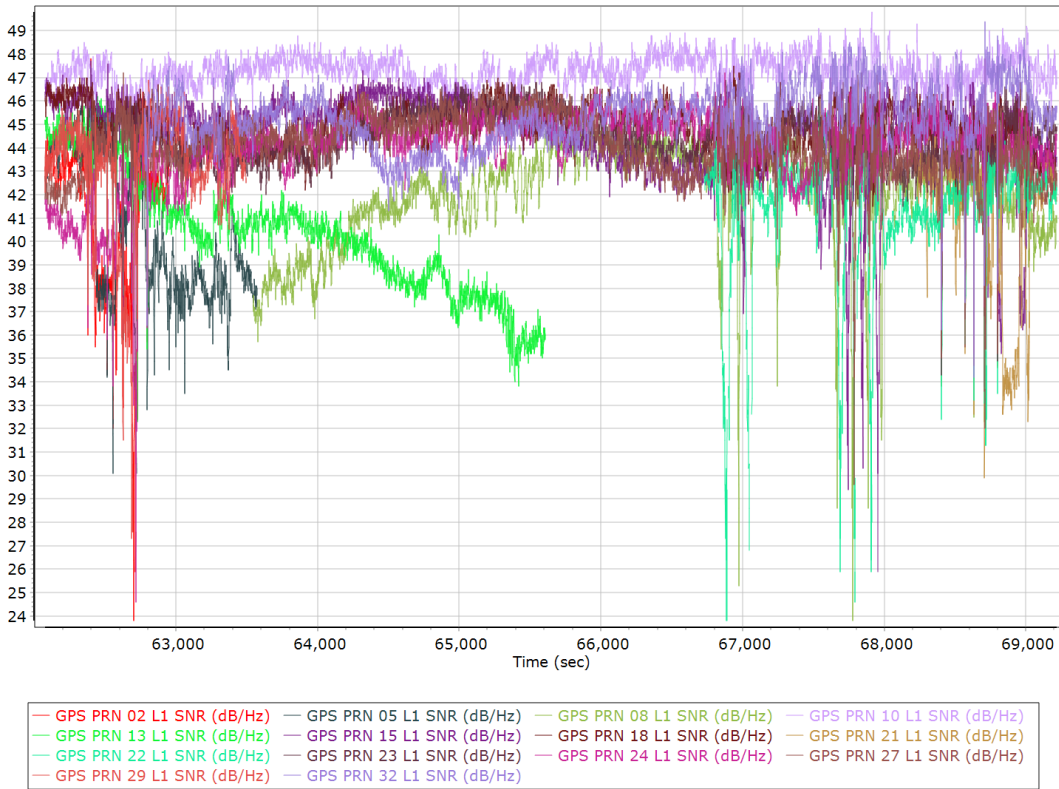
IMU data input file	imu_15316.dat
IMU data check log file	imudt_15316.log
IMU Records Processed	1427876
Termination Status	Normal
IMU Anomalies	0

Primary Observables & Satellite Data

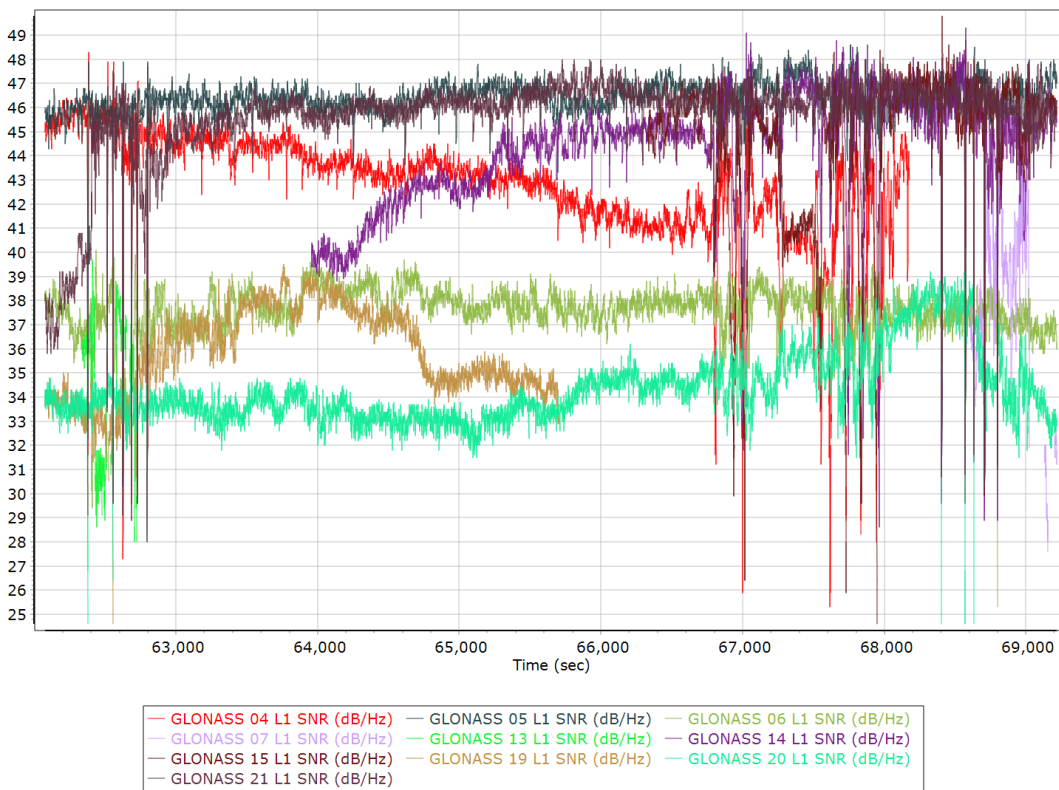
GPS/GLONASS L1 Satellite Lock/Elevation



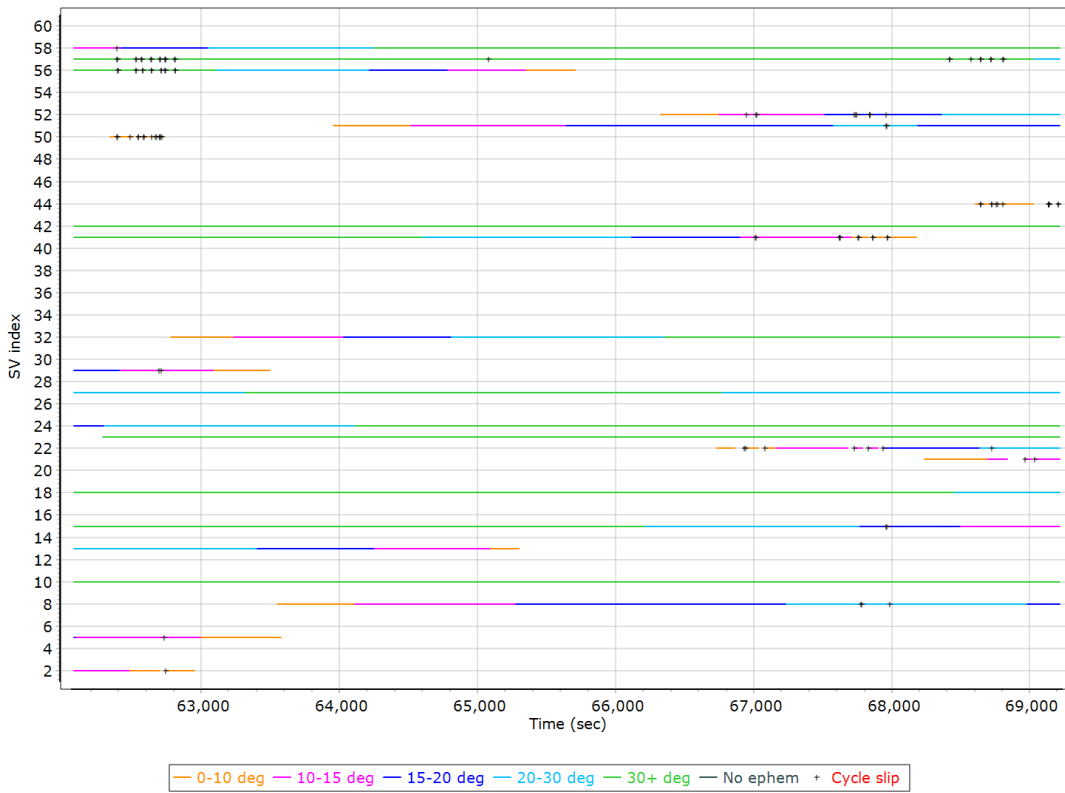
GPS L1 SNR



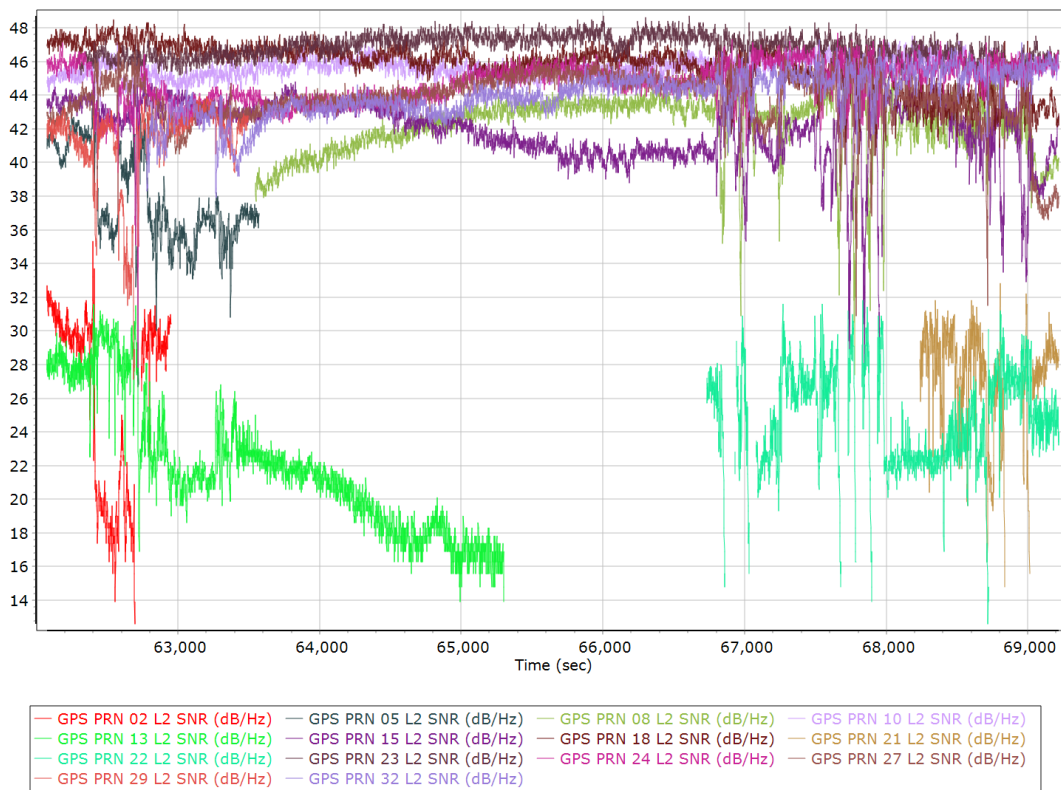
GLONASS L1 SNR



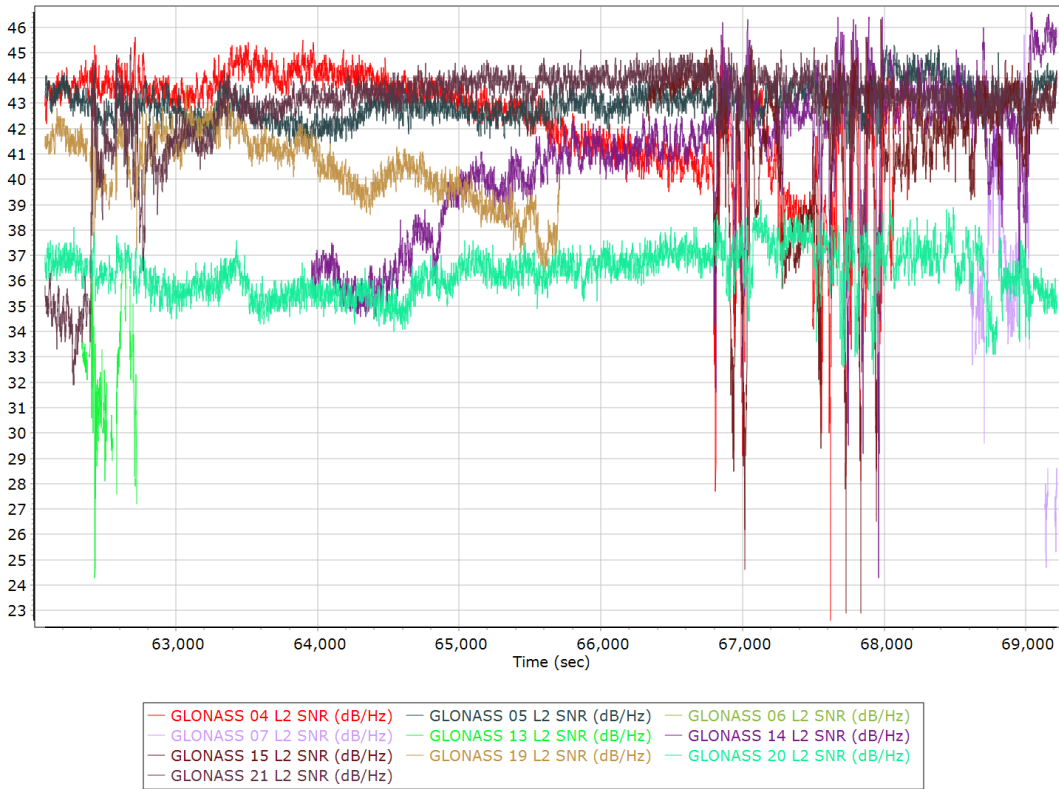
GPS/GLONASS L2 Satellite Lock/Elevation



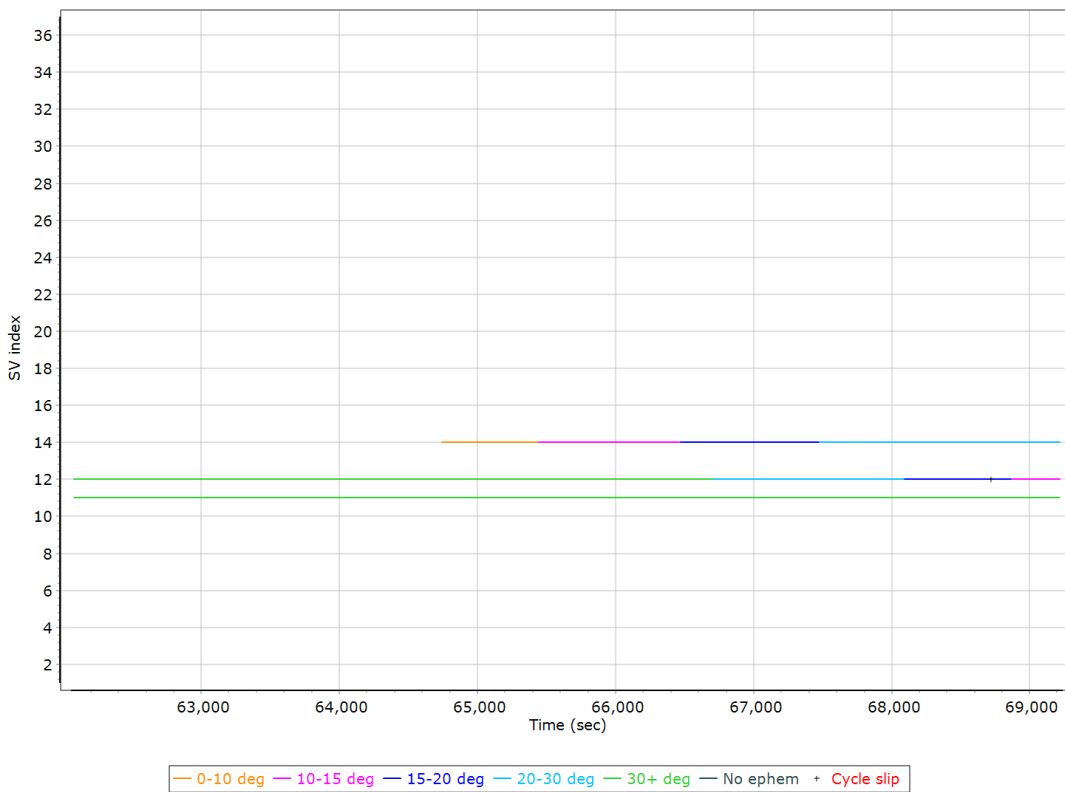
GPS L2 SNR



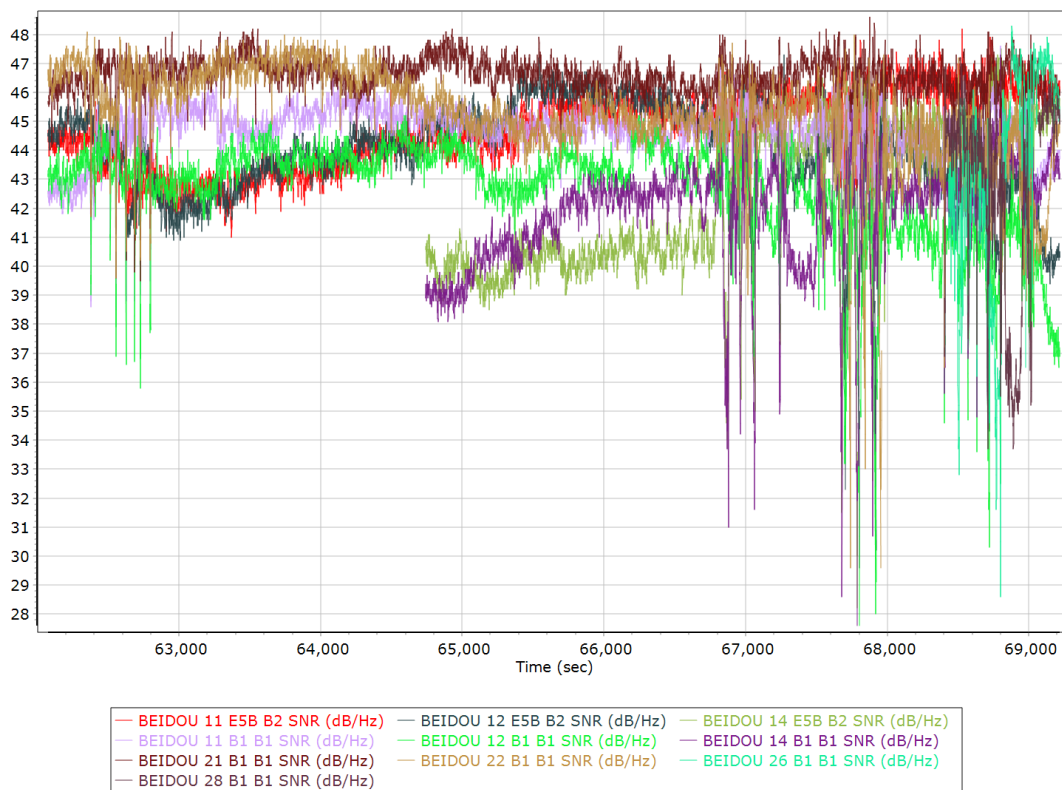
GLONASS L2 SNR



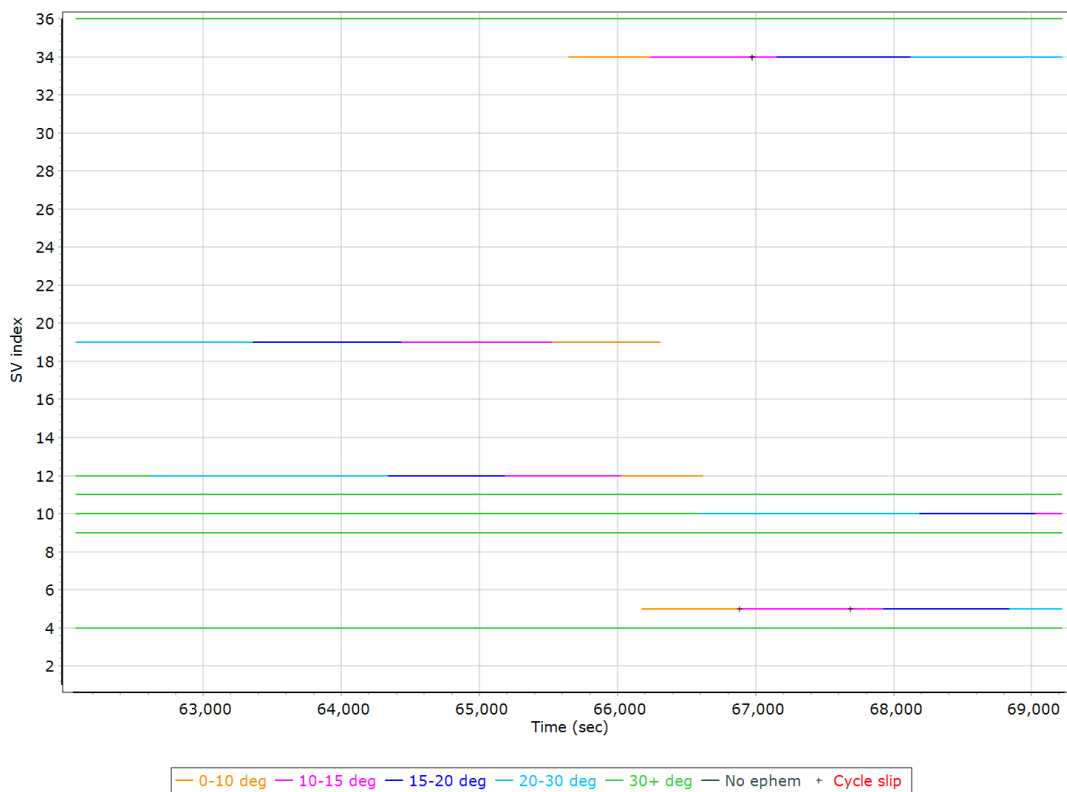
BEIDOU Satellite Lock/Elevation



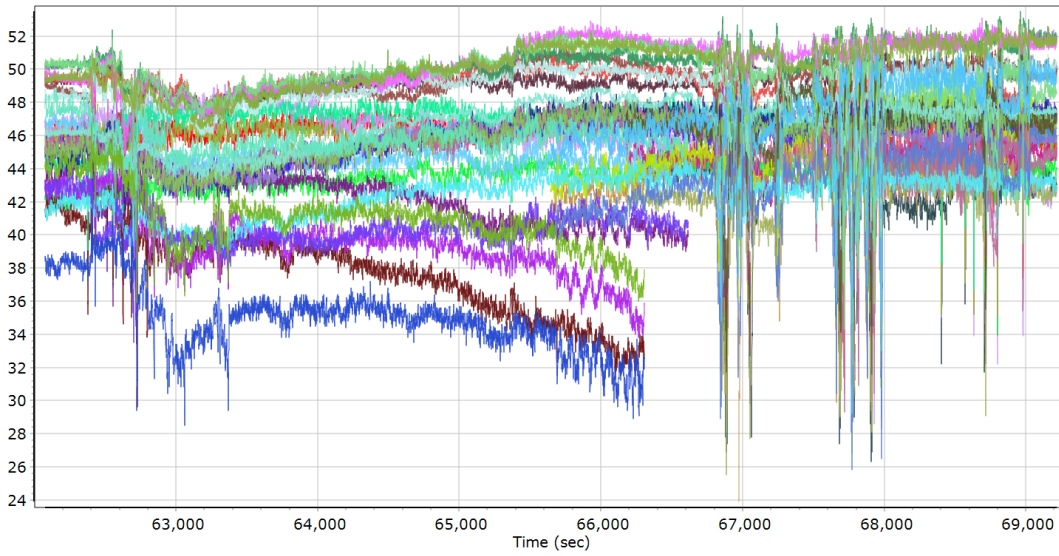
BEIDOU SNR



GALILEO Satellite Lock/Elevation



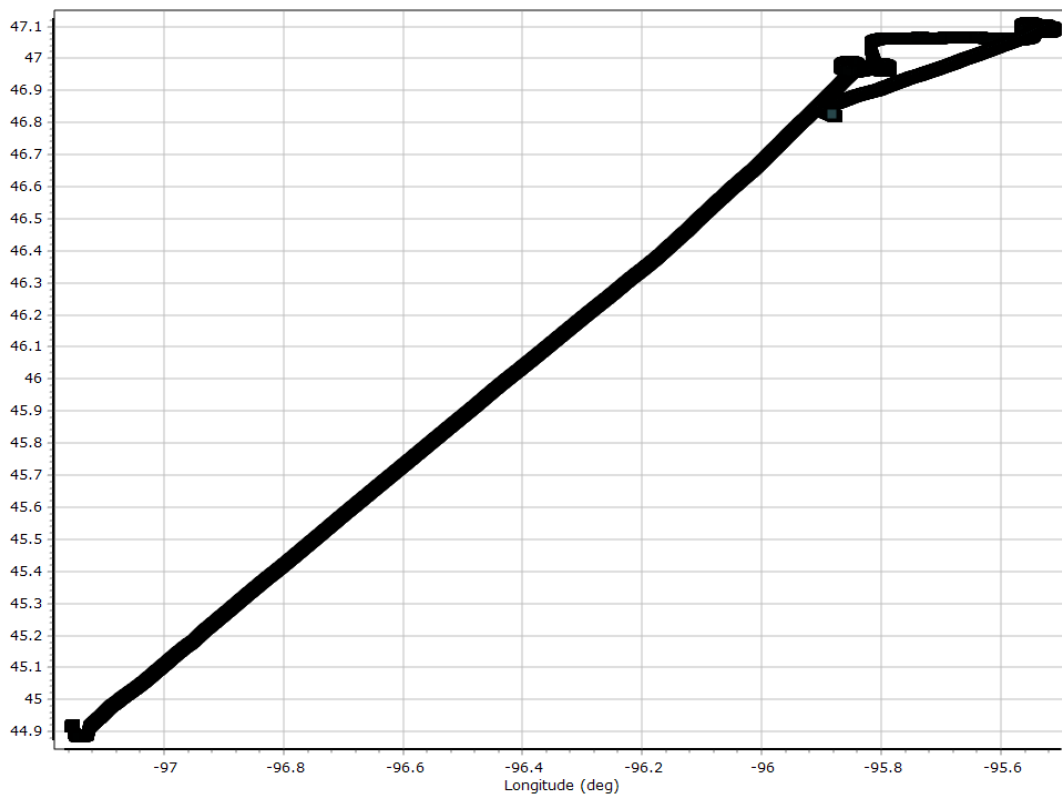
GALILEO SNR



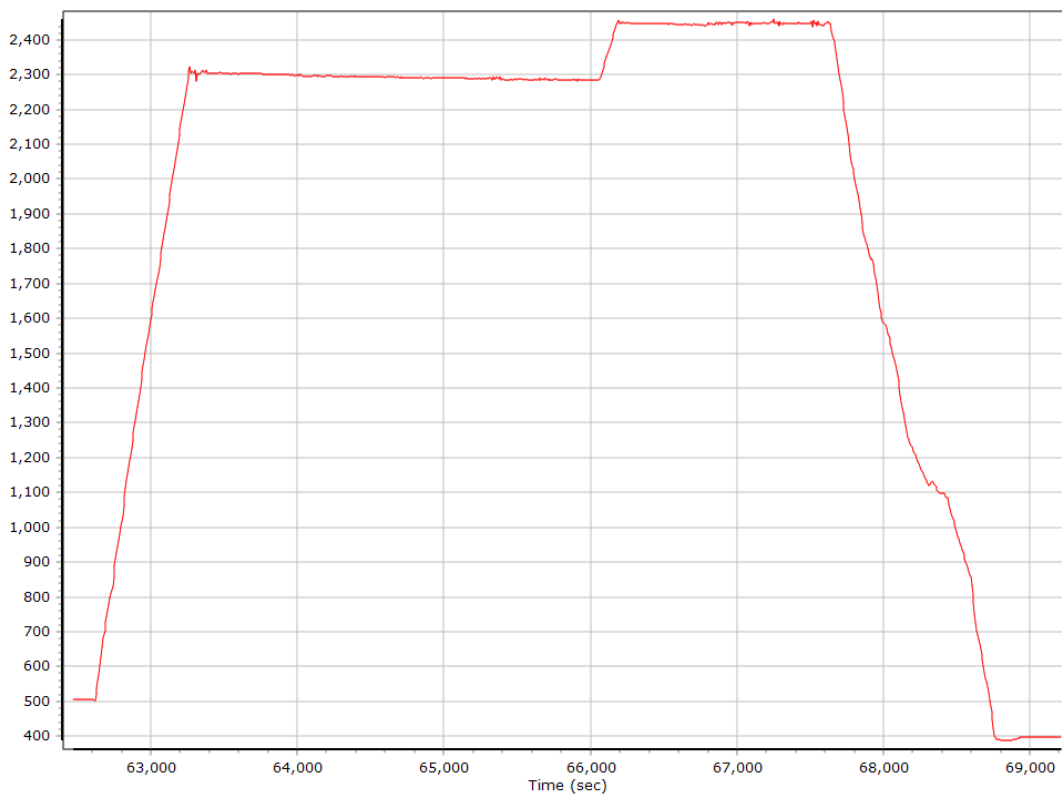
— GALILEO 04 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 05 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 09 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 10 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 11 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 12 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 19 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 34 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)
— GALILEO 36 L1 BOC_1_1_DP_MBOC SNR (dB/Hz)	— GALILEO 04 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 05 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 09 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 10 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 11 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 12 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 19 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 34 L5E5A BPSK10_PD SNR (dB/Hz)	— GALILEO 36 L5E5A BPSK10_PD SNR (dB/Hz)
— GALILEO 04 E5B BPSK10_PD SNR (dB/Hz)	— GALILEO 05 E5B BPSK10_PD SNR (dB/Hz)

Smoothed Trajectory Information

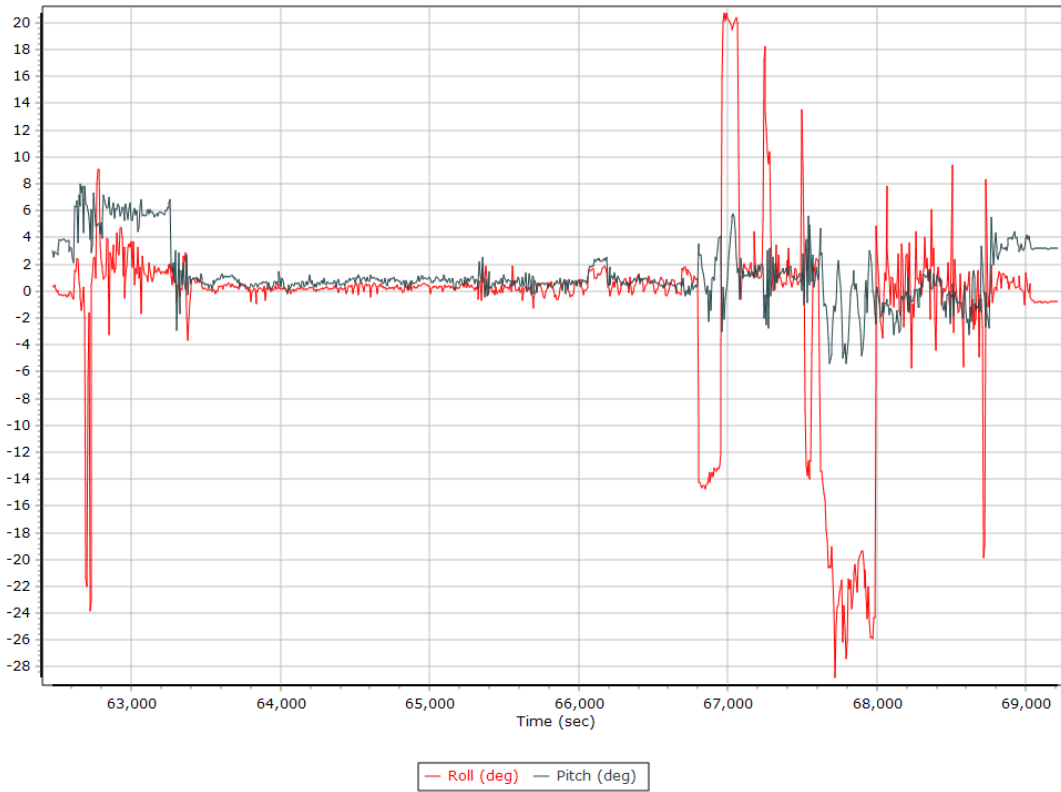
Top View



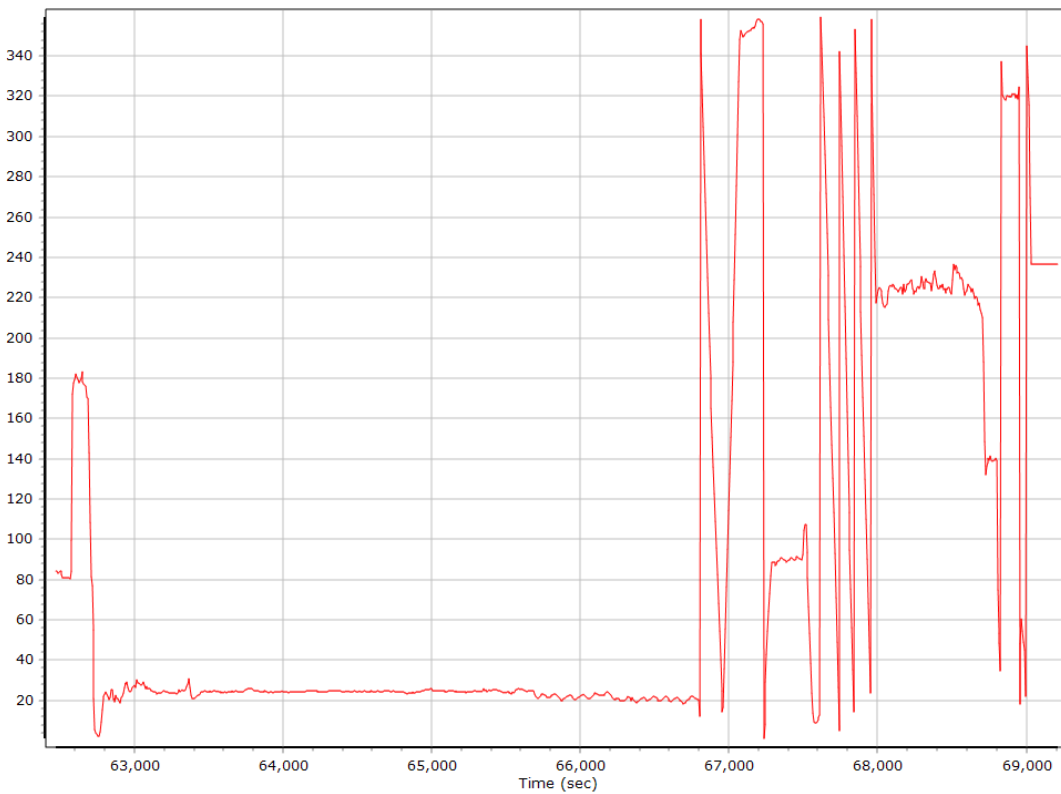
Altitude



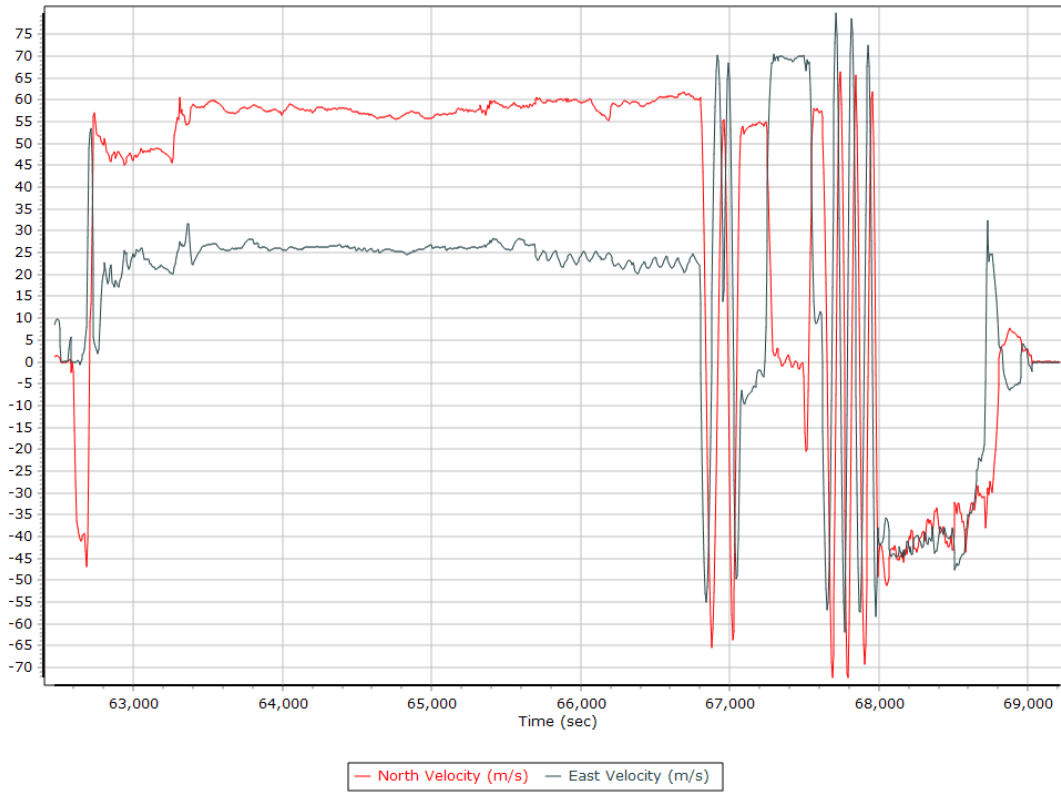
Roll/Pitch



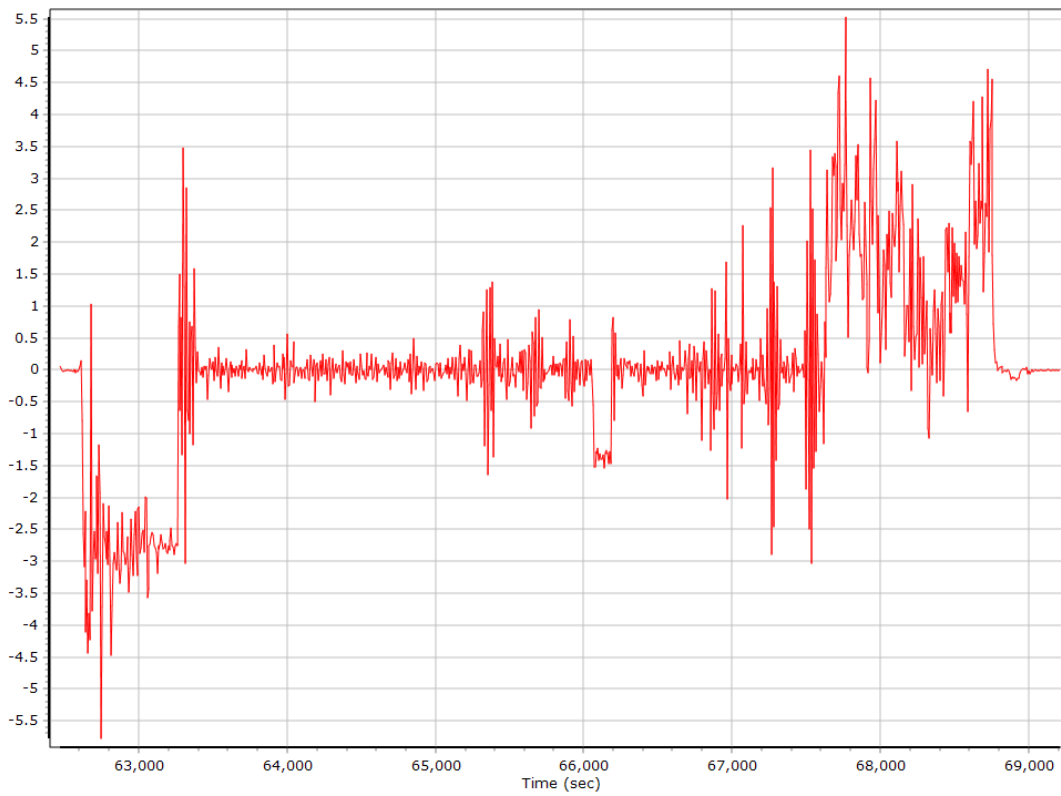
Heading



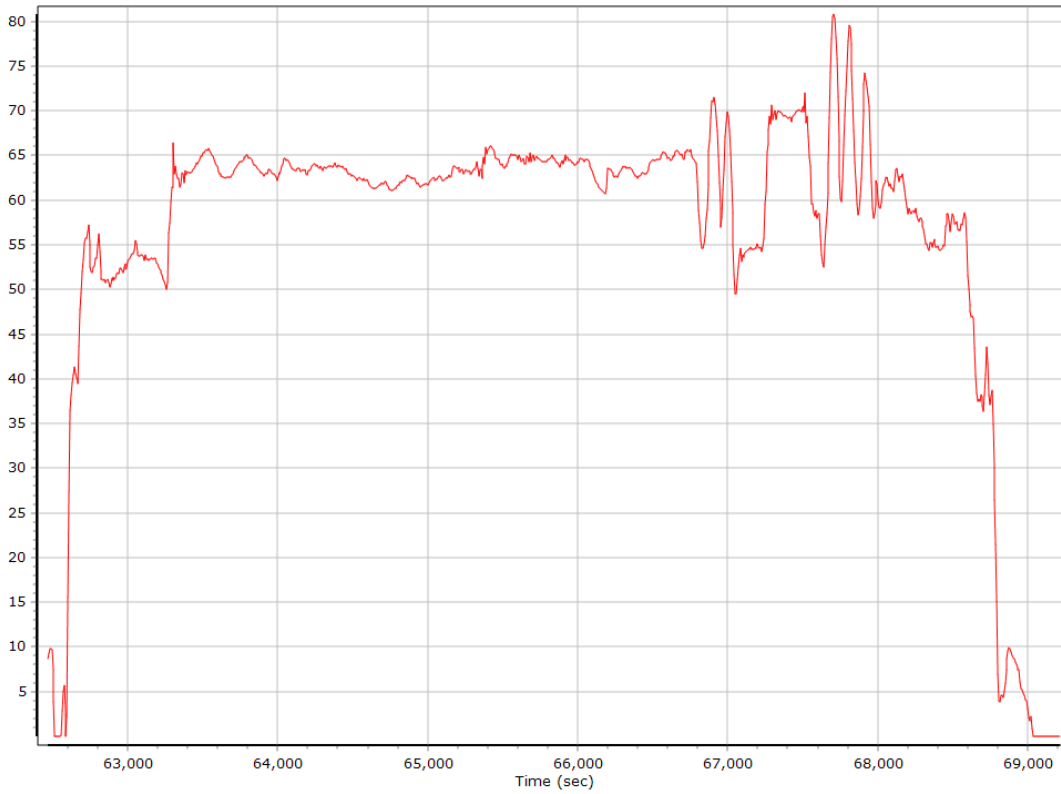
North/East Velocity



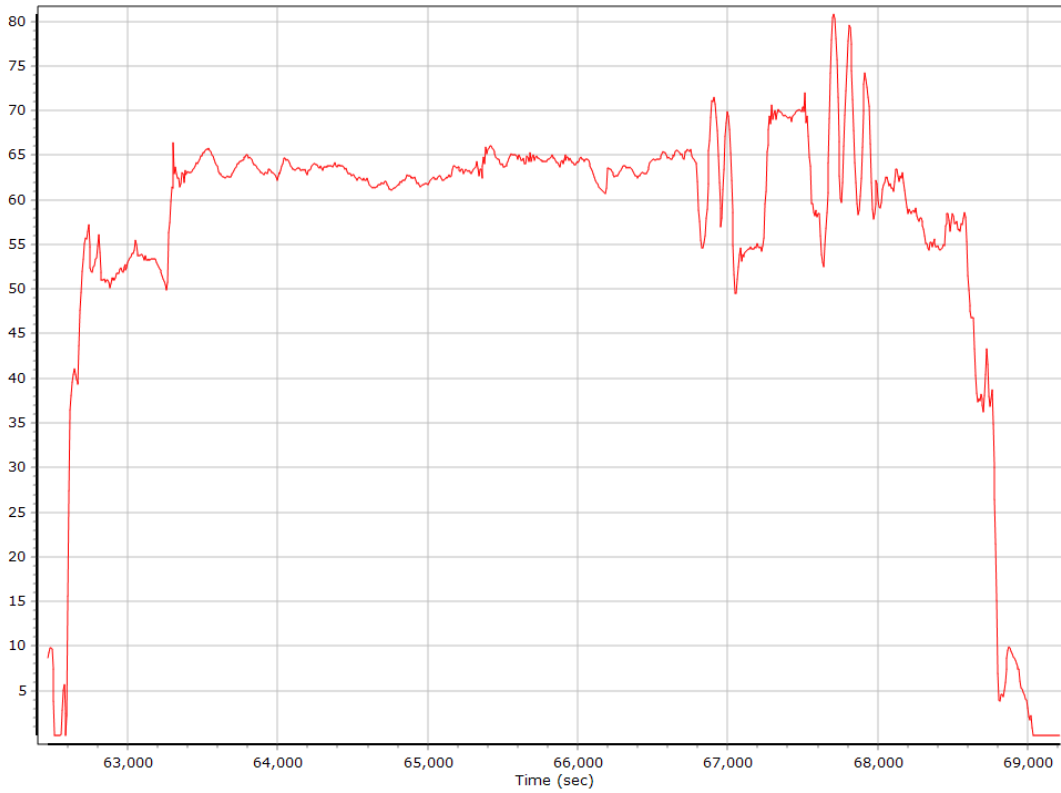
Down Velocity



Total Speed



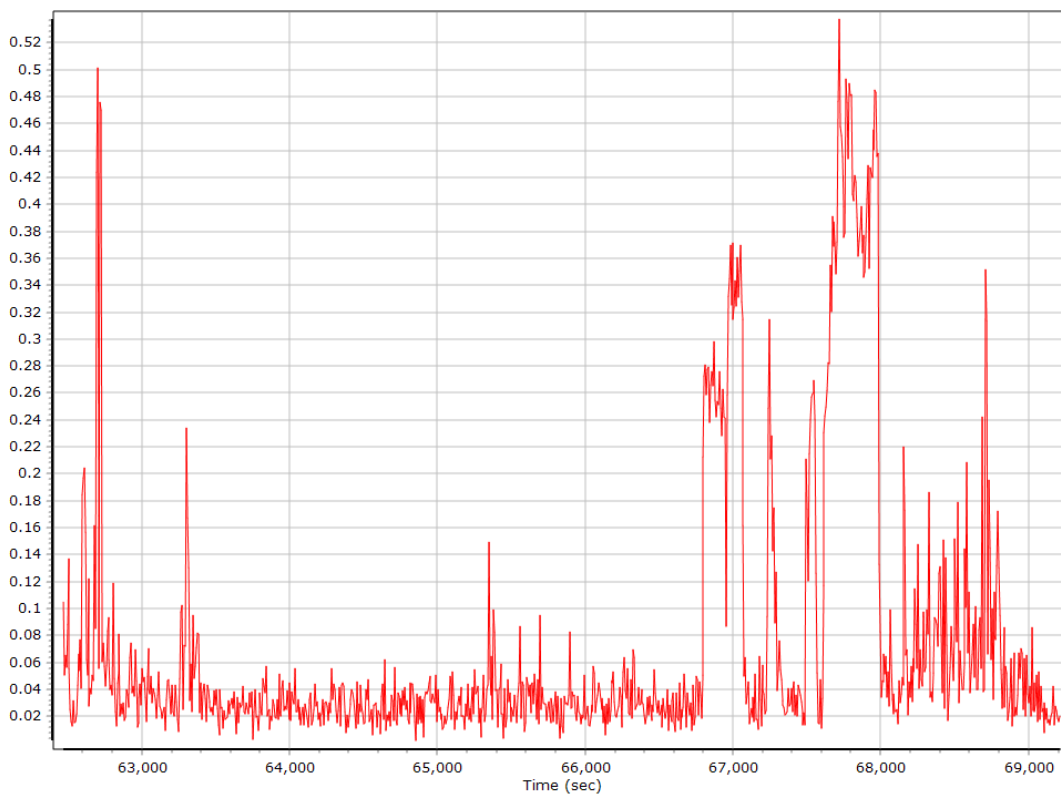
Ground Speed



Body Acceleration



Total Body Acceleration

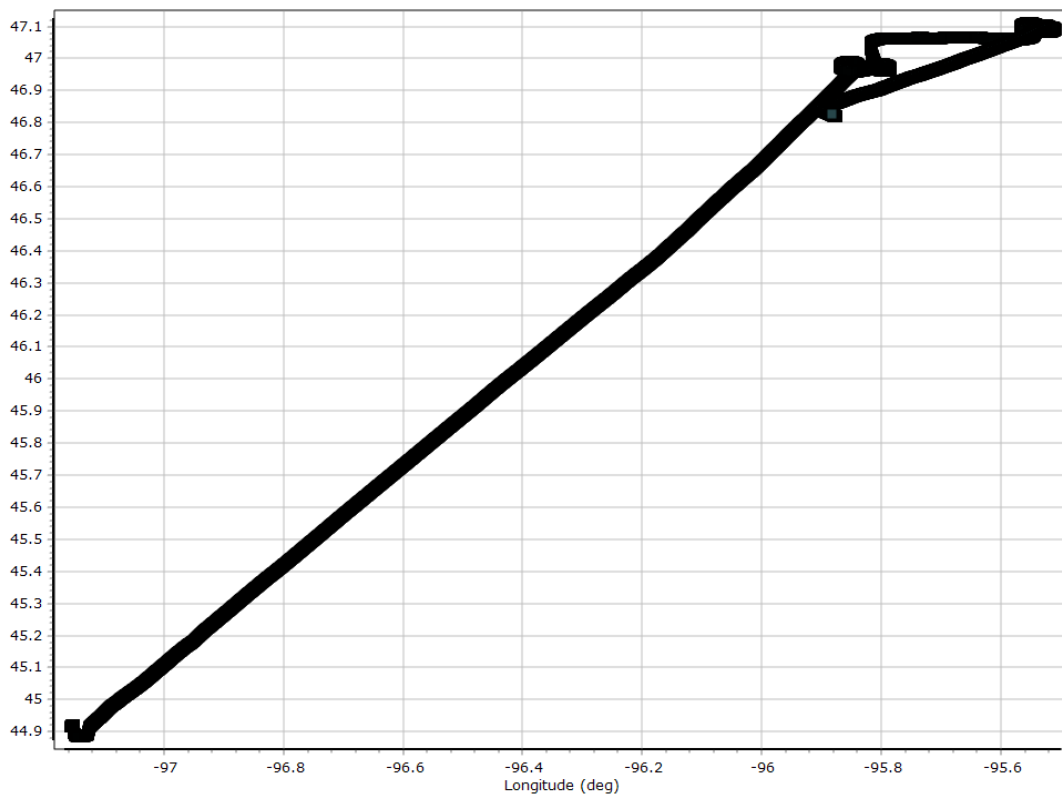


Body Angular Rate

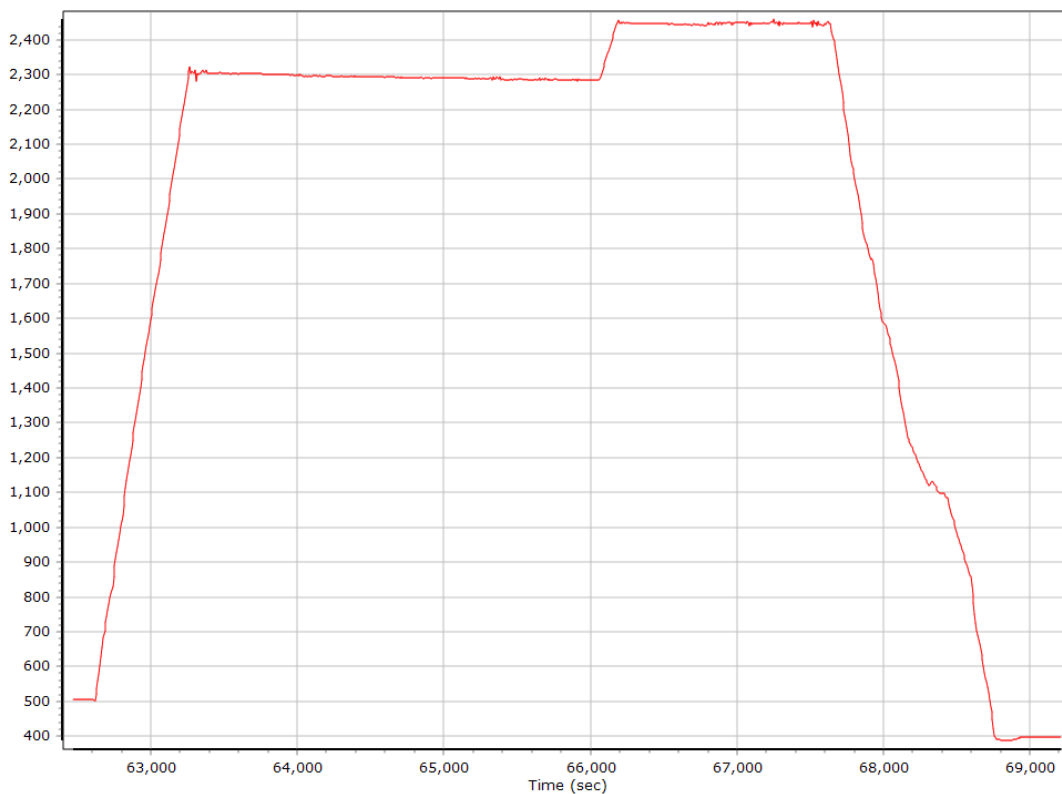


Forward Processed Trajectory Information

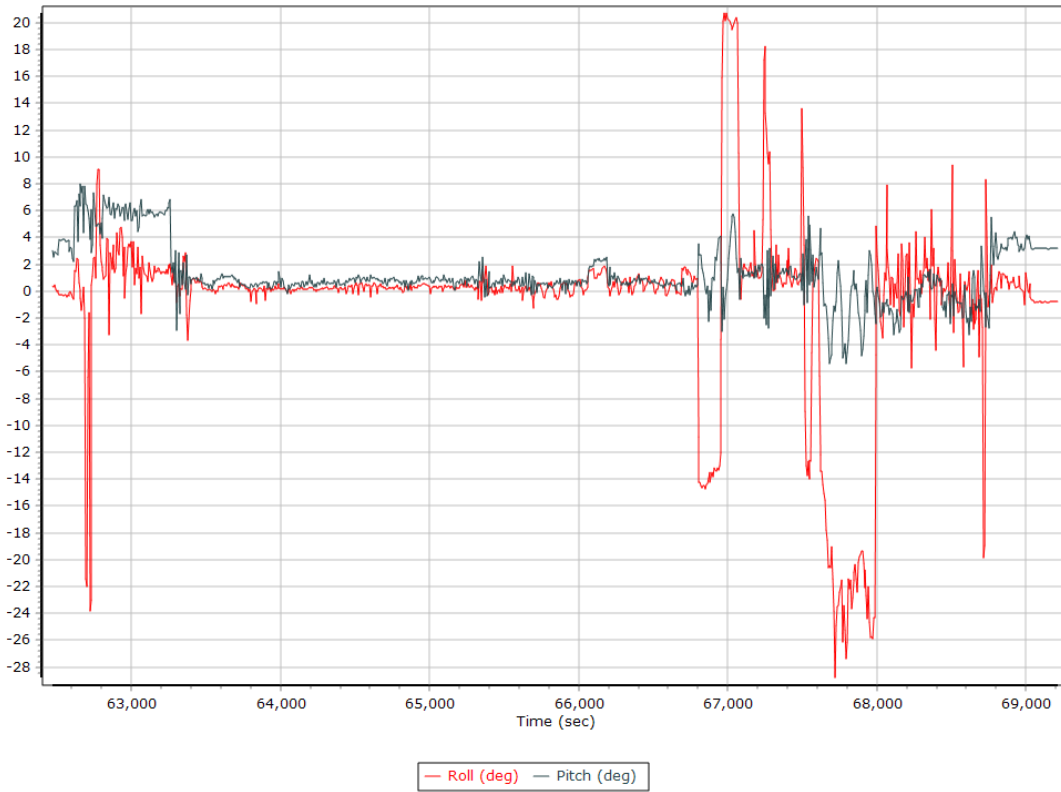
Top View



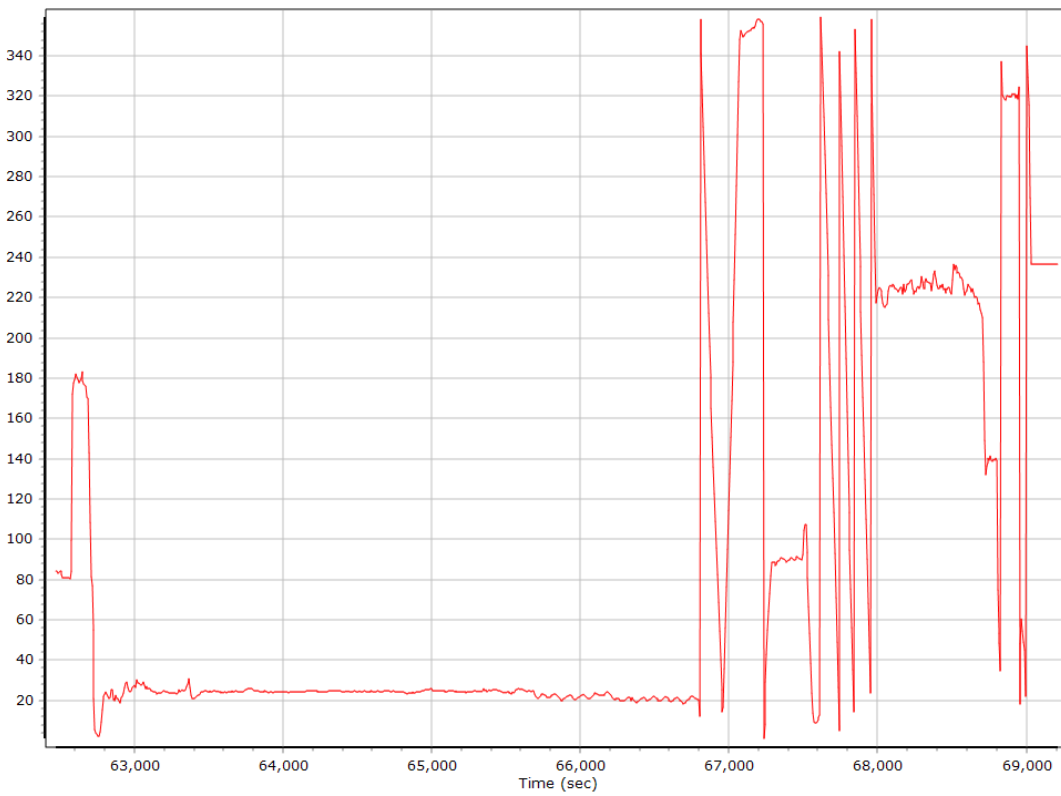
Altitude



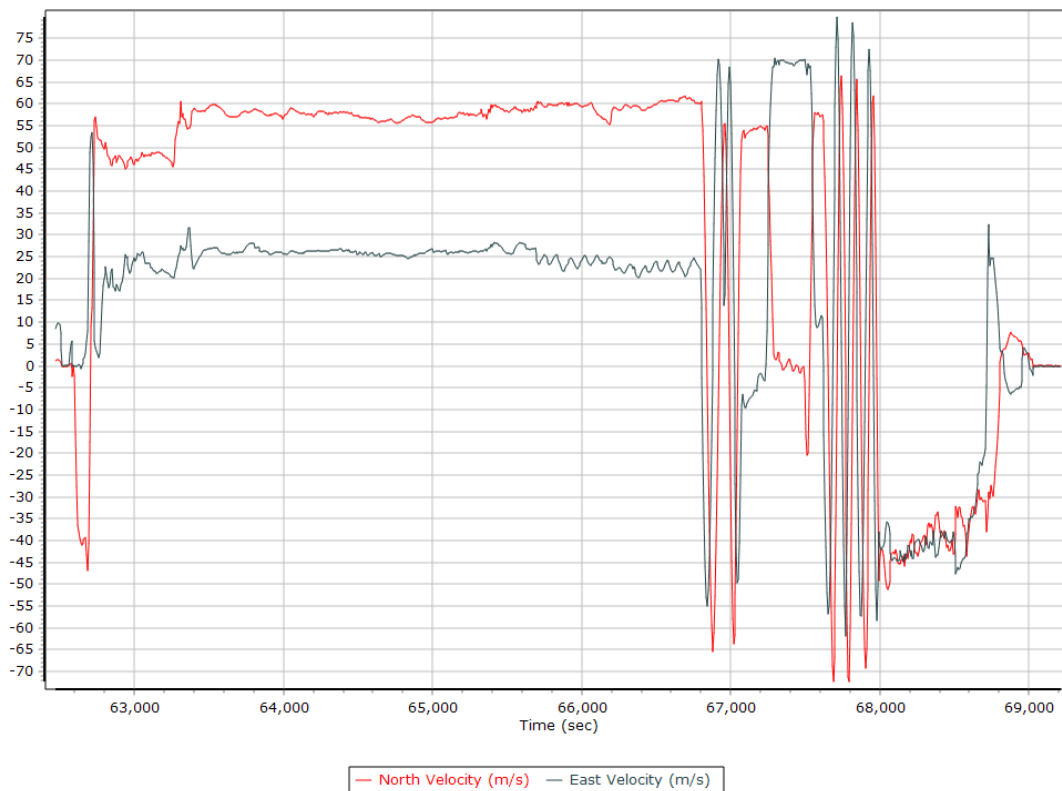
Roll/Pitch



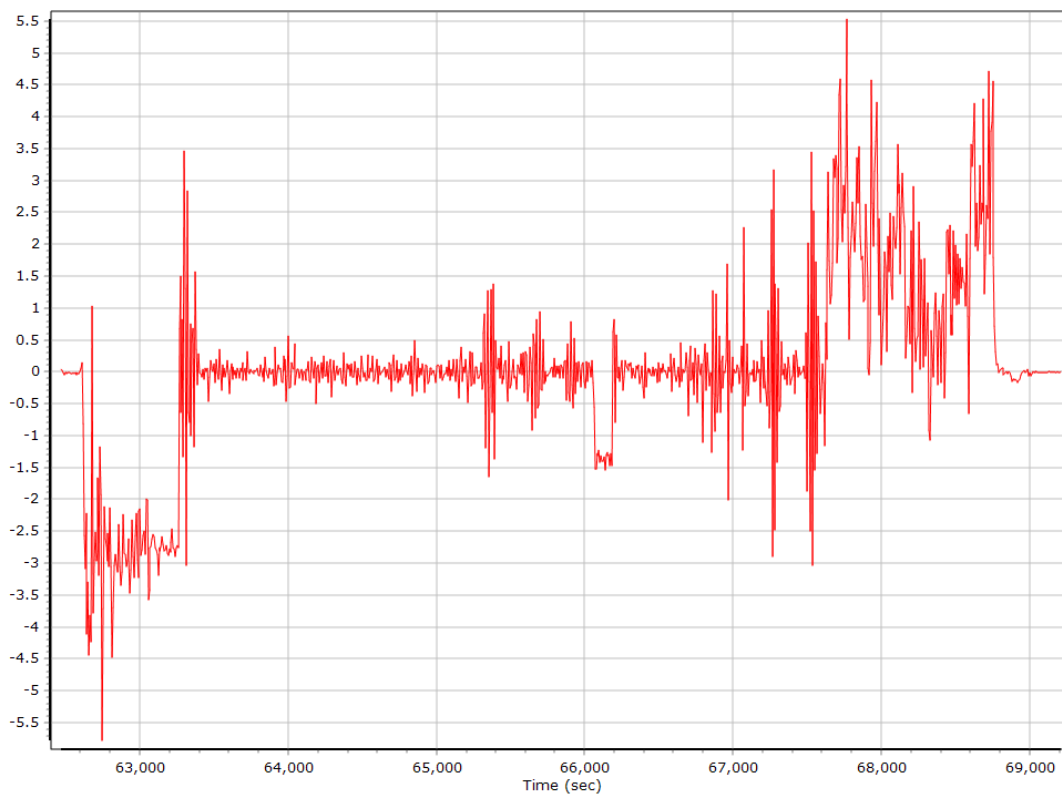
Heading



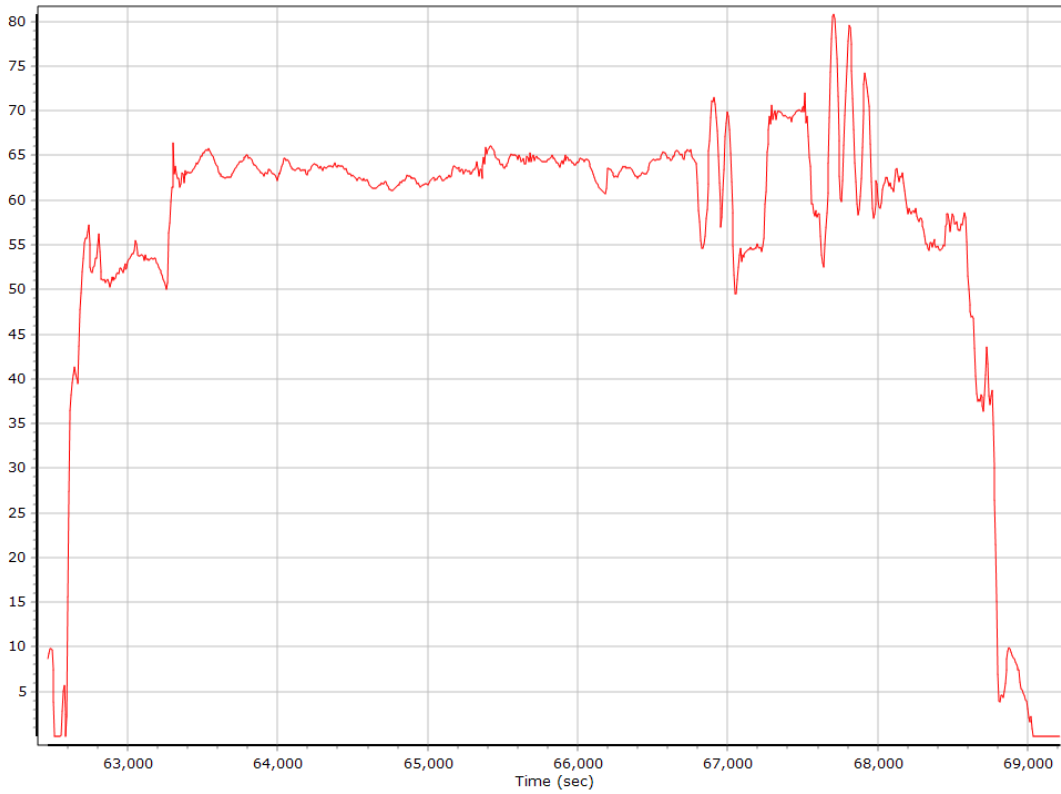
North/East Velocity



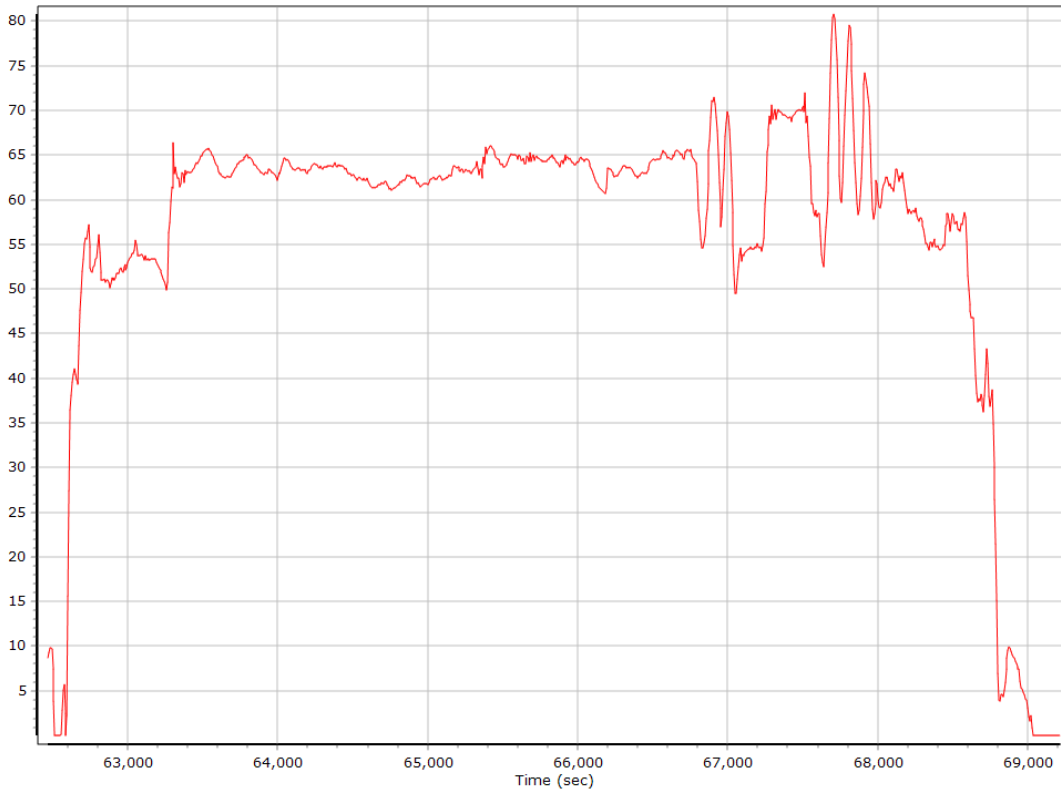
Down Velocity



Total Speed



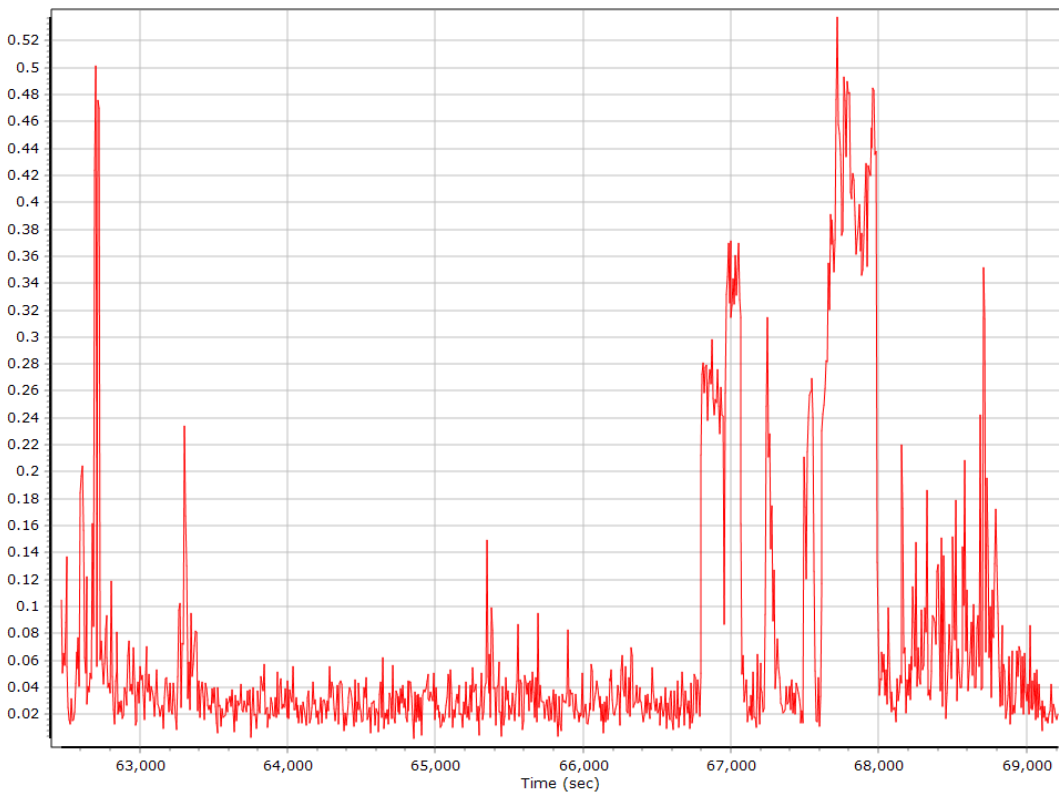
Ground Speed



Body Acceleration



Total Body Acceleration



Body Angular Rate

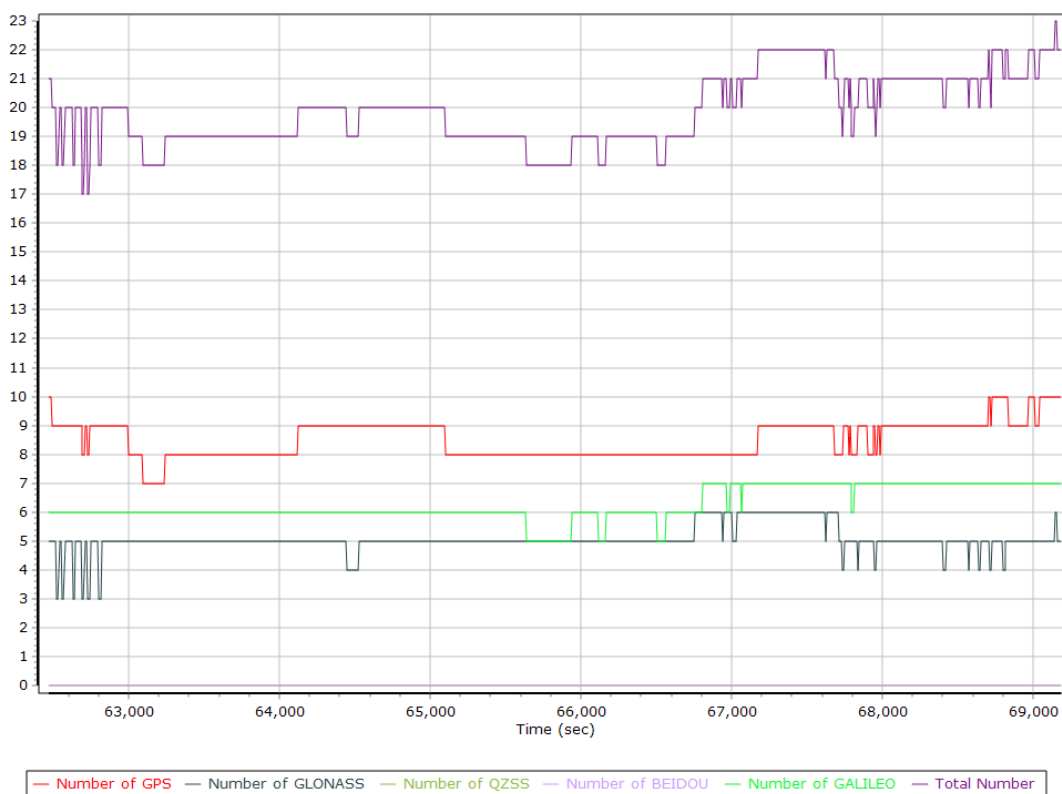


GNSS QC

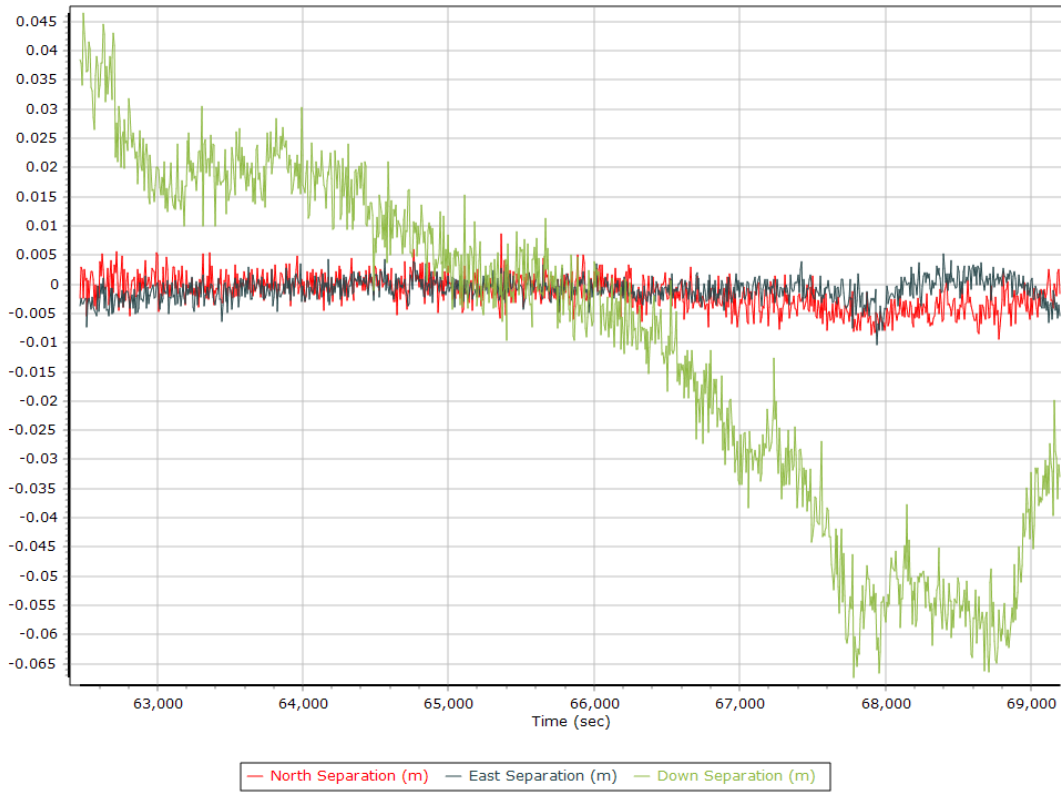
GNSS QC Statistics

Statistics	Min	Max	Mean
Baseline length (km)	0.00	0.00	
Number of GPS SV	7	10	9
Number of GLONASS SV	2	6	5
Number of QZSS SV	0	0	0
Number of BEIDOU SV	0	0	0
Number of GALILEO SV	5	7	6
Total number of SV	17	23	20
PDOP	1.00	1.41	1.13
QC Solution Gaps	0.00	0.00	
Solution Type	Fixed	Float	No solution
Epoch (sec)	7106.00	0.00	0.00
Percentage	100.00	0.00	0.00

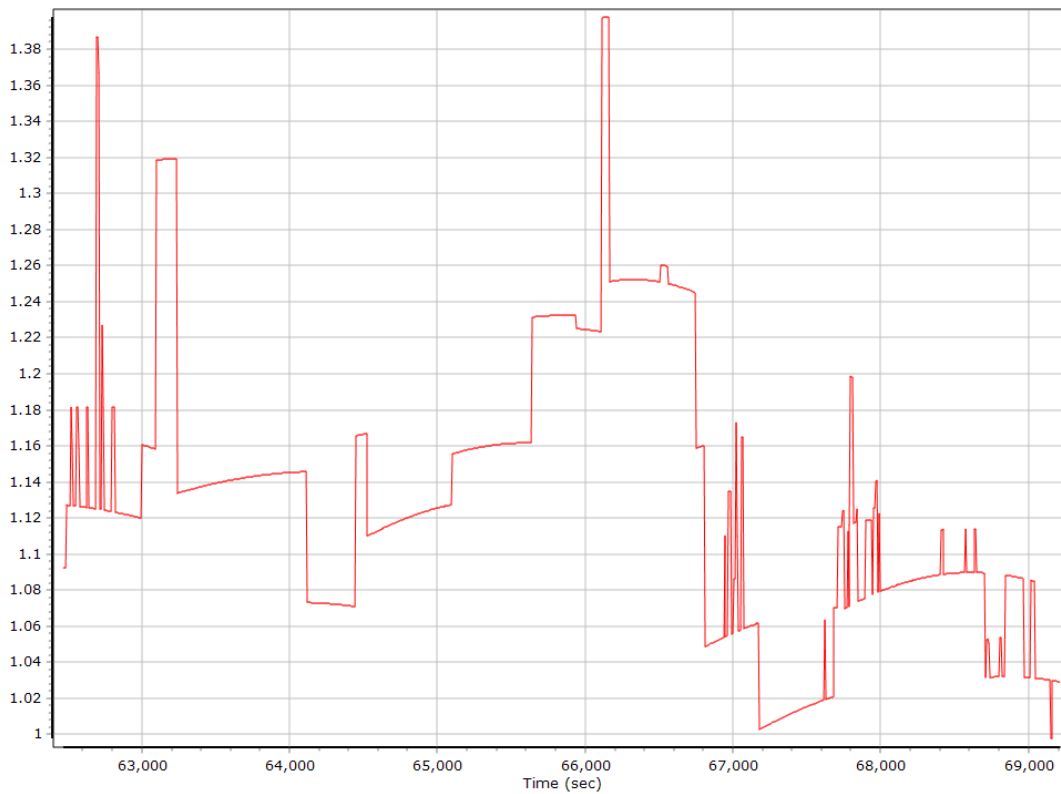
Num SVs in solution



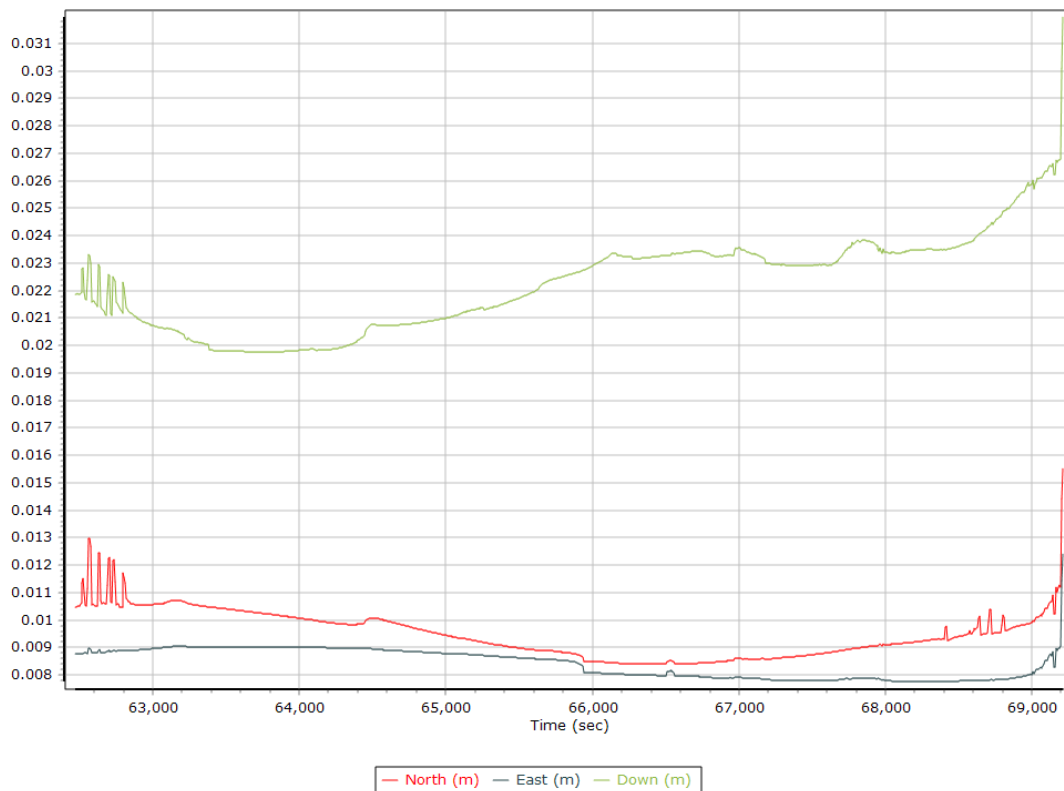
Forward/Reverse Separation



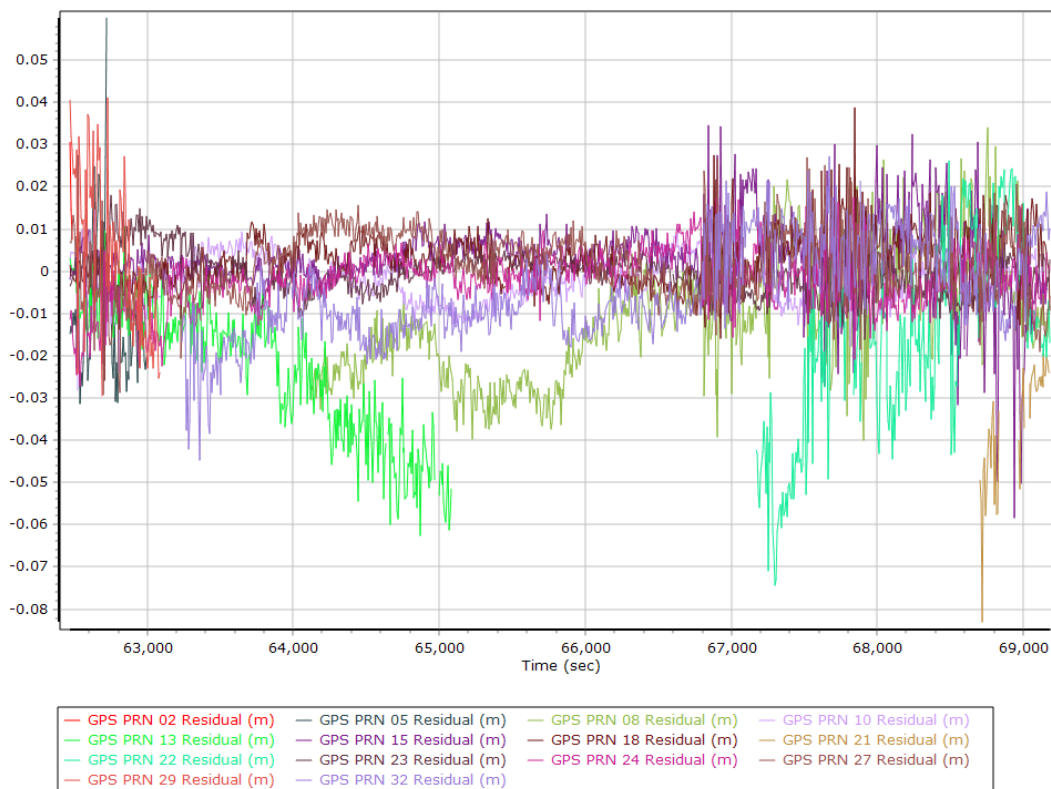
PDOP



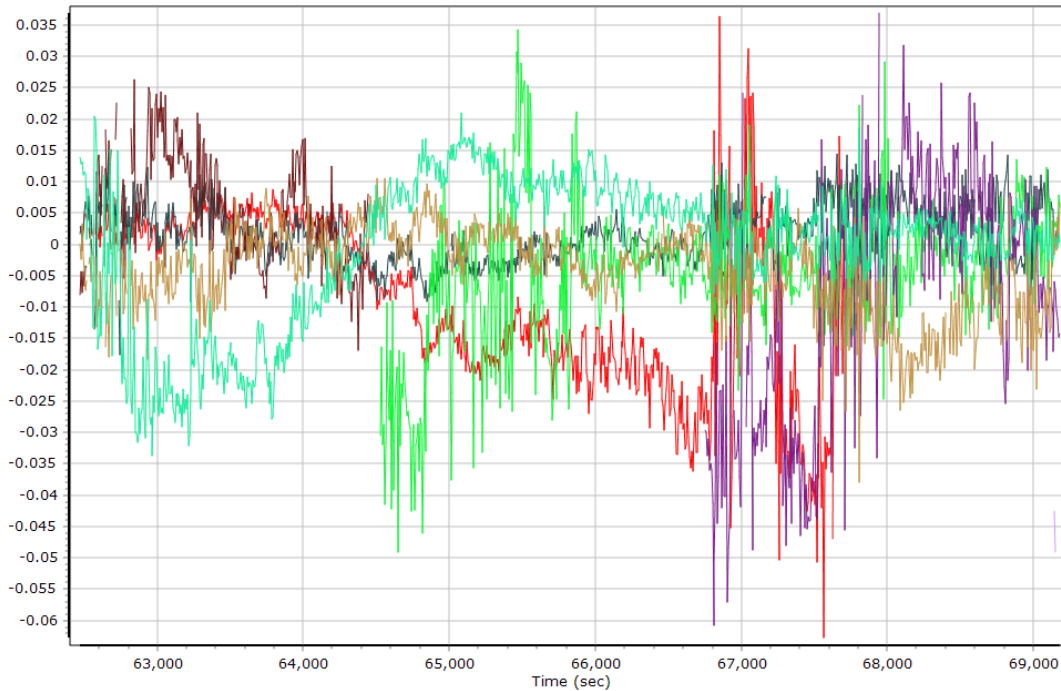
Estimated Position Accuracy



GPS Residuals

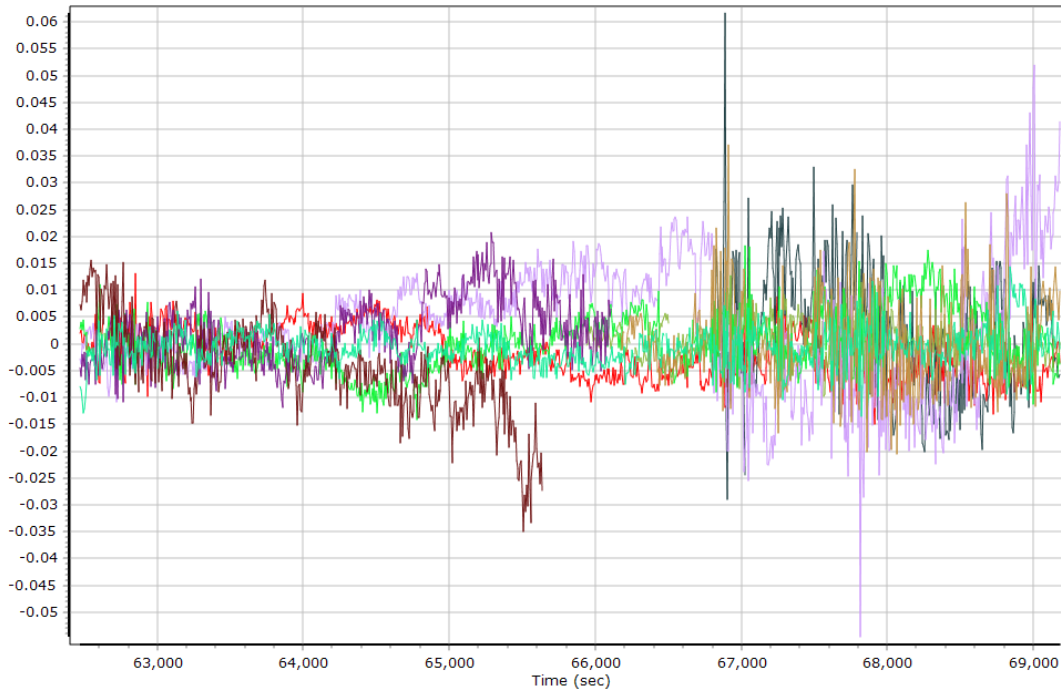


GLONASS Residuals



- GLONASS 04 Residual (m)
- GLONASS 05 Residual (m)
- GLONASS 06 Residual (m)
- GLONASS 07 Residual (m)
- GLONASS 14 Residual (m)
- GLONASS 15 Residual (m)
- GLONASS 19 Residual (m)
- GLONASS 20 Residual (m)
- GLONASS 21 Residual (m)

GALILEO Residuals



- GALILEO 04 Residual (m)
- GALILEO 05 Residual (m)
- GALILEO 09 Residual (m)
- GALILEO 10 Residual (m)
- GALILEO 11 Residual (m)
- GALILEO 12 Residual (m)
- GALILEO 19 Residual (m)
- GALILEO 34 Residual (m)

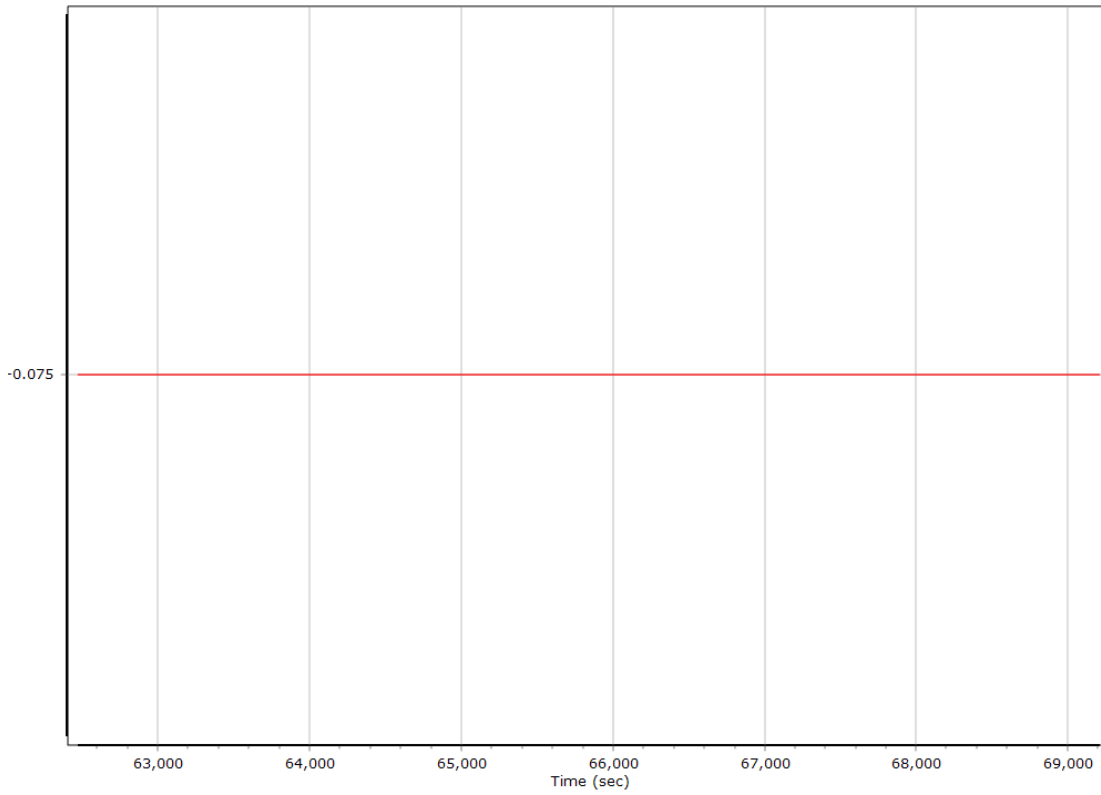
GNSS-Inertial Processor Configuration

Processing mode	IN-Fusion PP-RTX		
Stabilized mount	True		
Processing start time	62077.000 (09/18/2022 17:14:37)		
Processing end time	69217.000 (09/18/2022 19:13:37)		
Initial attitude source	Real-Time VNAV/RNAV Attitude		
IMU Sensor Context	Processing with Onboard IMU		
Gimbal to IMU lever arm (m)	-0.229	-0.010	-0.133
Gimbal to IMU mounting angles (deg)	0.000	0.000	180.000
Gimbal to Primary GNSS lever arm (m)	-0.075	0.084	-1.028
Gimbal to Primary GNSS lever arm std dev (m)	0.030	0.030	0.030
Aircraft to Reference mounting angles (deg)	0.000	0.000	0.000

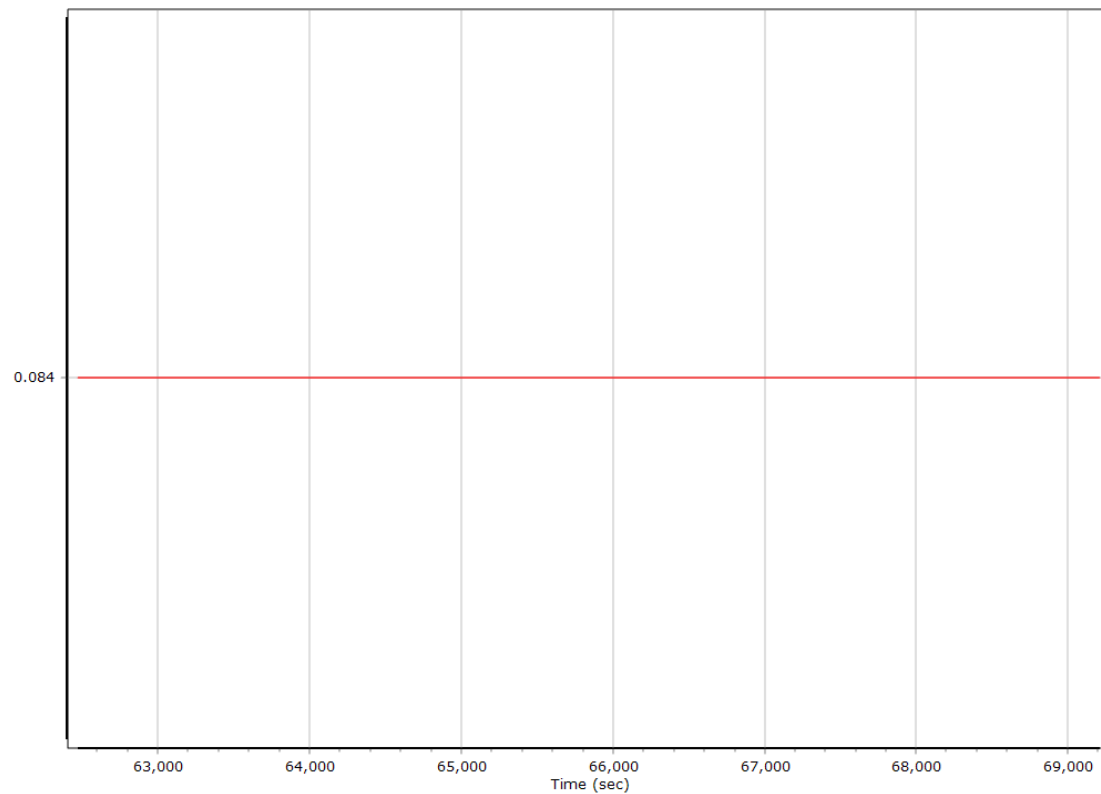
Calibrated Installation Parameters

Reference-Primary GNSS Lever Arm (m)

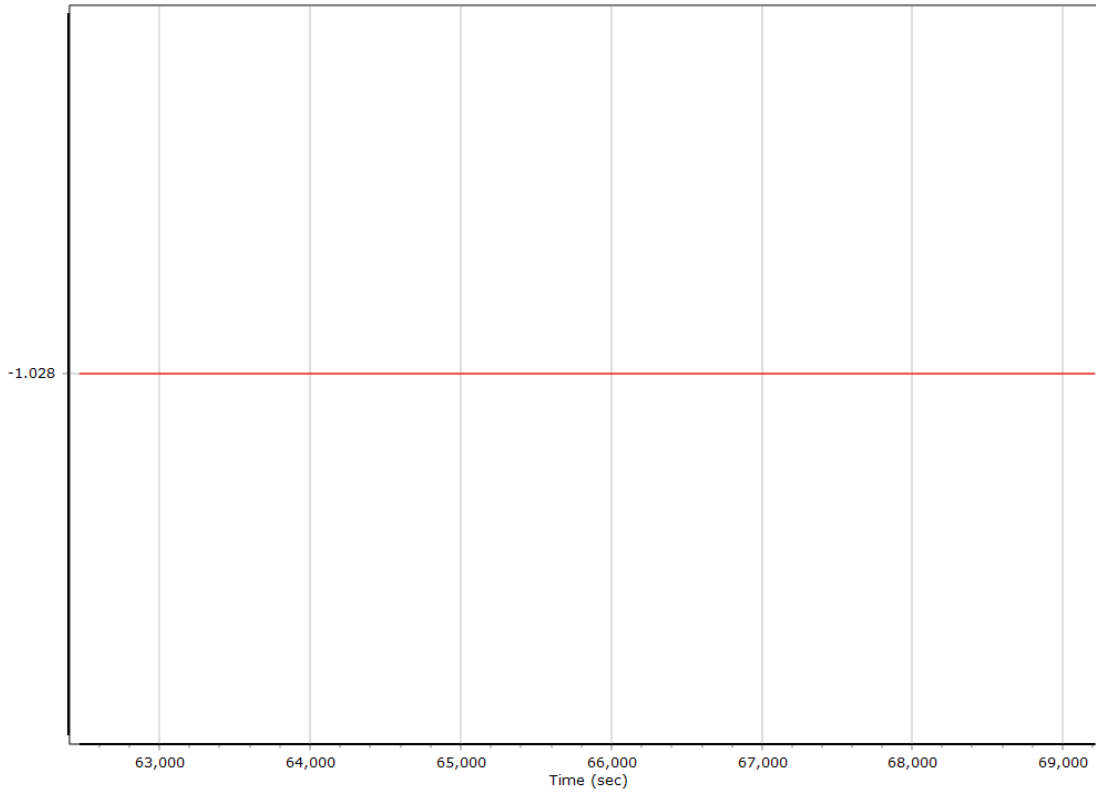
X Reference-Primary GNSS Lever Arm (m)



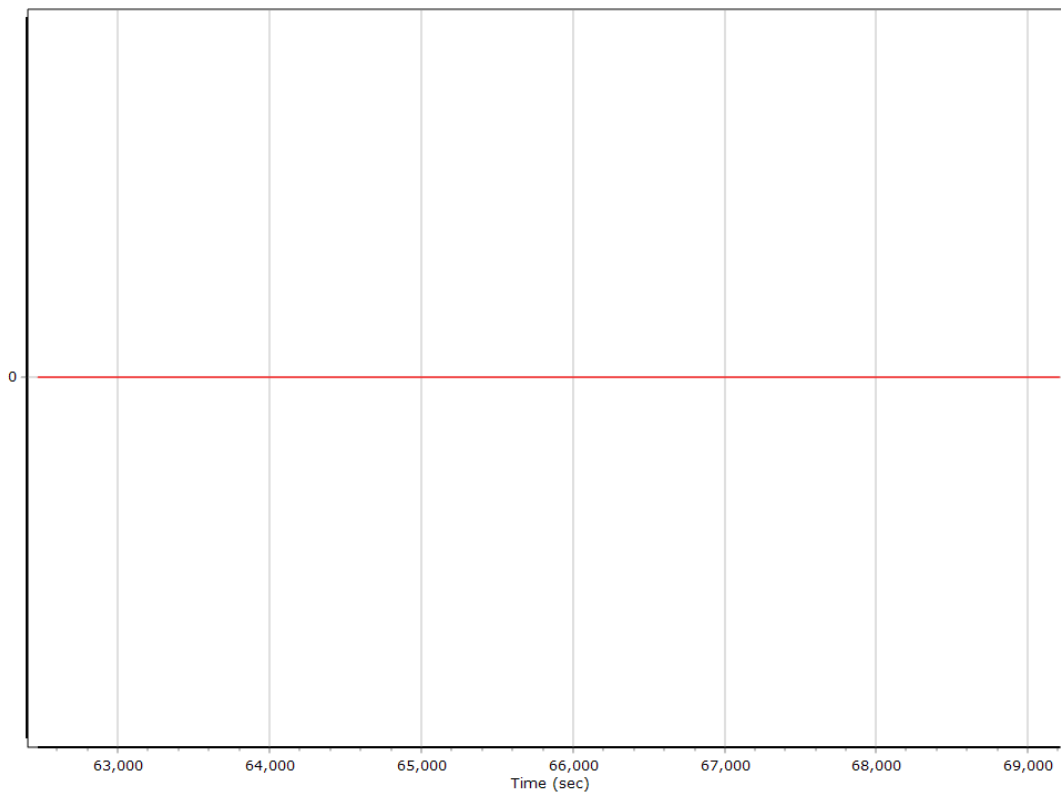
Y Reference-Primary GNSS Lever Arm (m)



Z Reference-Primary GNSS Lever Arm (m)



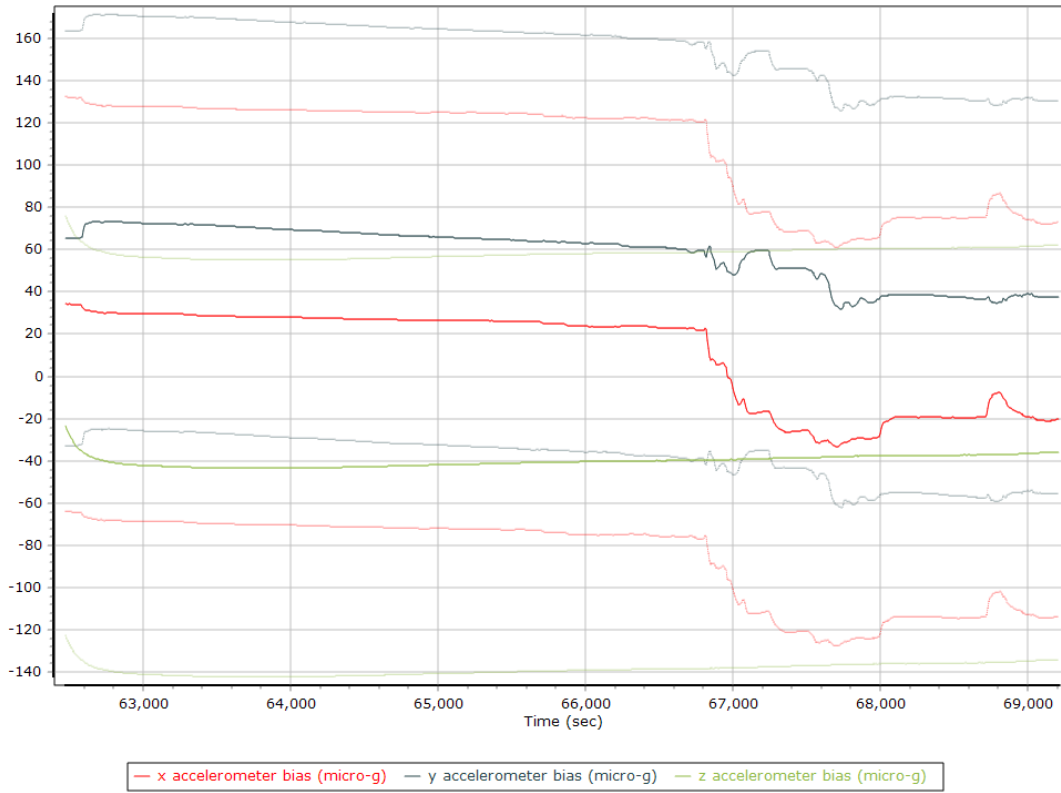
Reference-Primary GNSS Lever Arm Figure of Merit



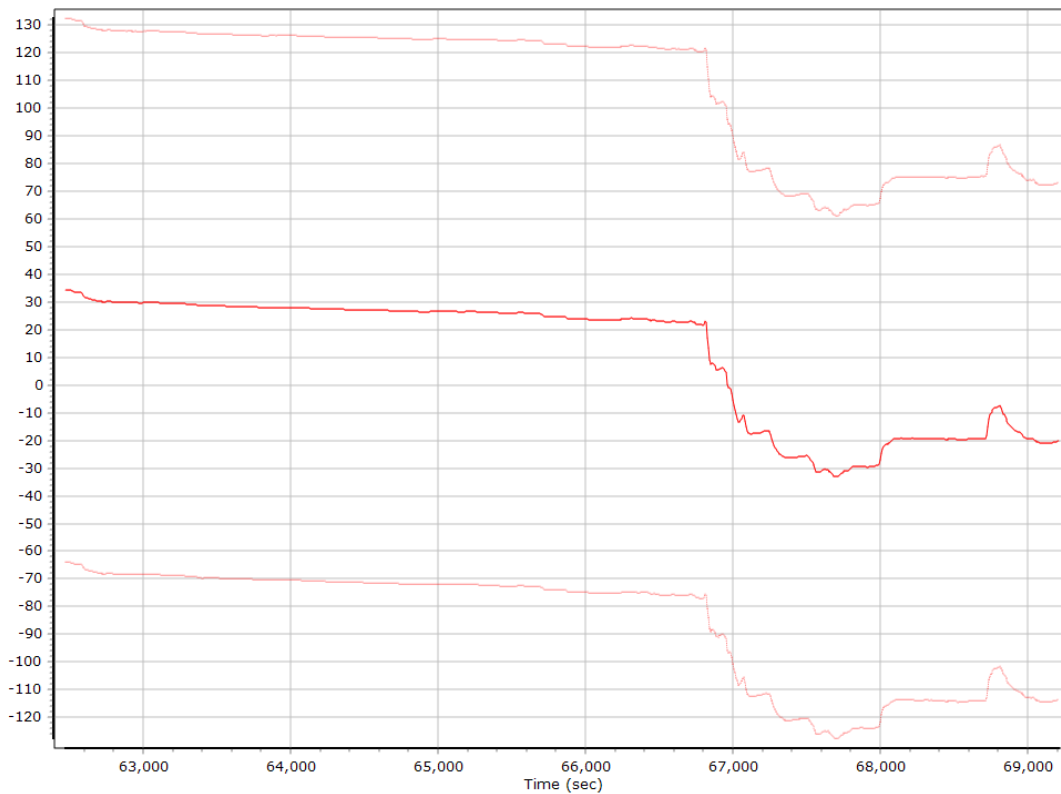
IN-Fusion QC

Forward Processed Estimated Errors, Reference Frame

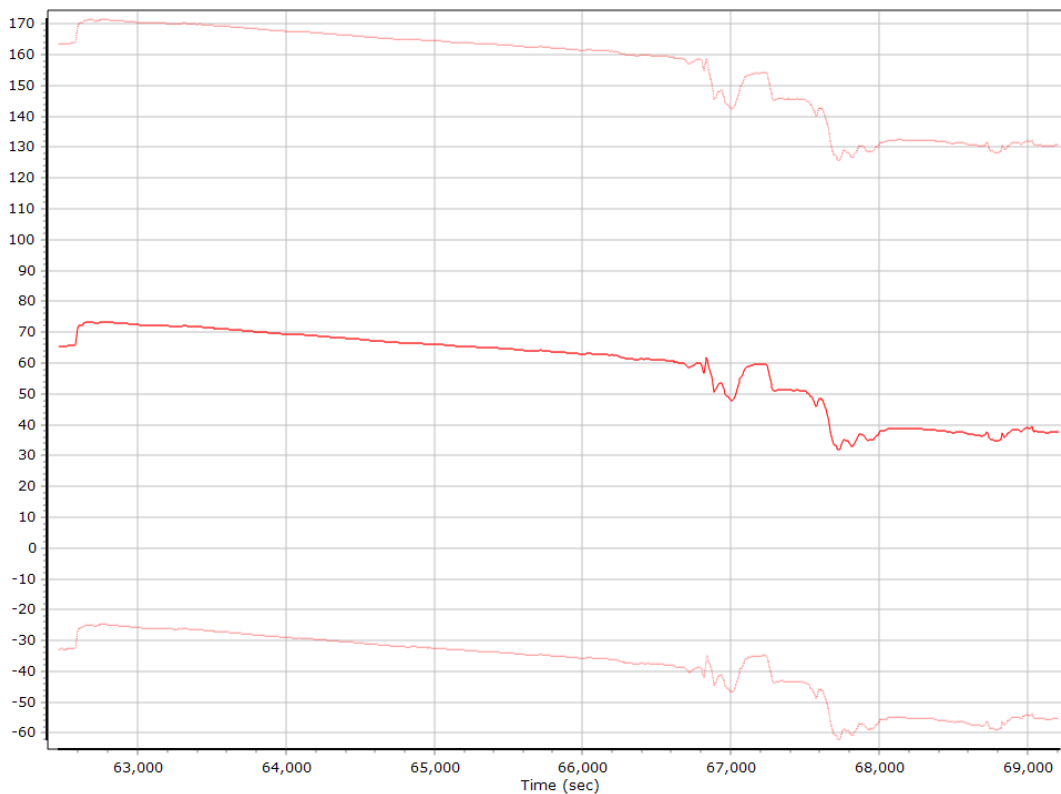
Accelerometer Bias (micro-g)



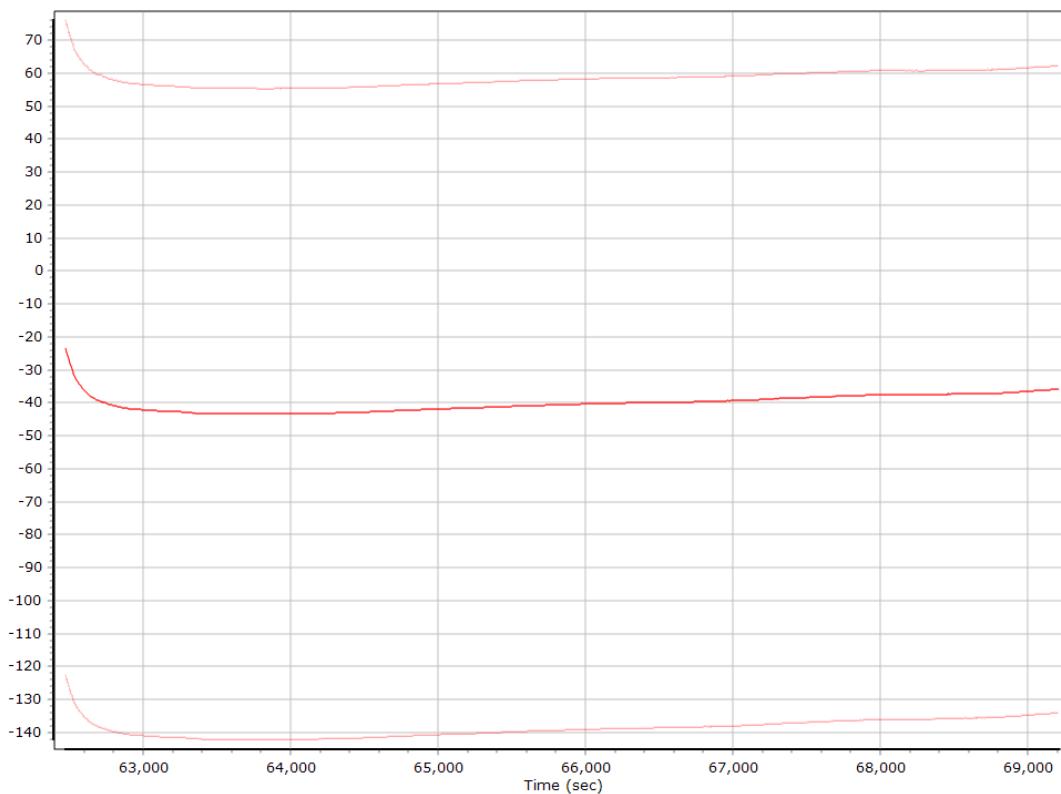
X Accelerometer Bias (micro-g)



Y Accelerometer Bias (micro-g)



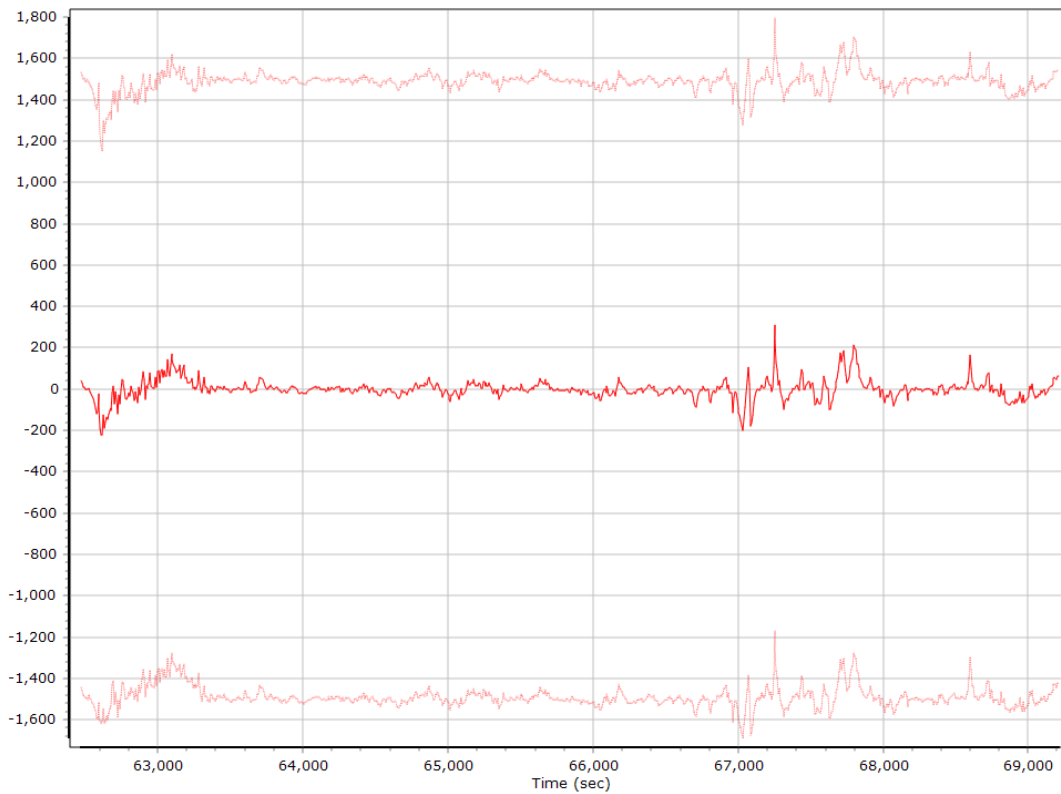
Z Accelerometer Bias (micro-g)



Accelerometer Scale Error (ppm)



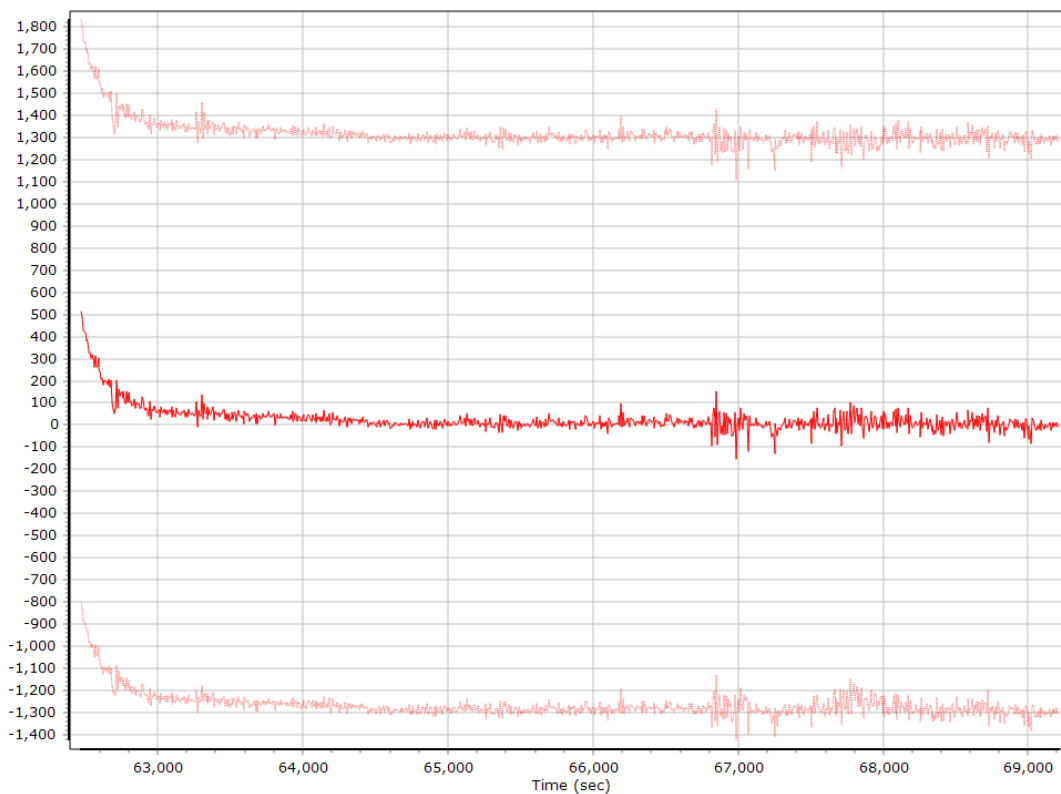
X Accelerometer Scale Error (ppm)



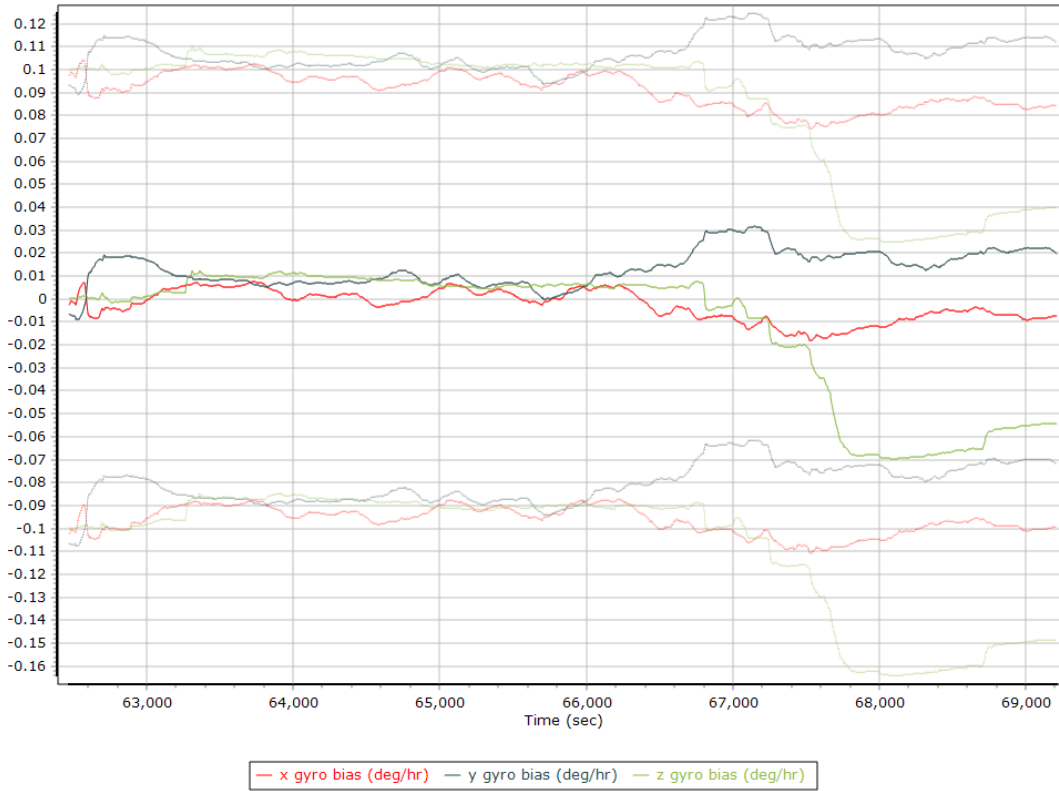
Y Accelerometer Scale Error (ppm)



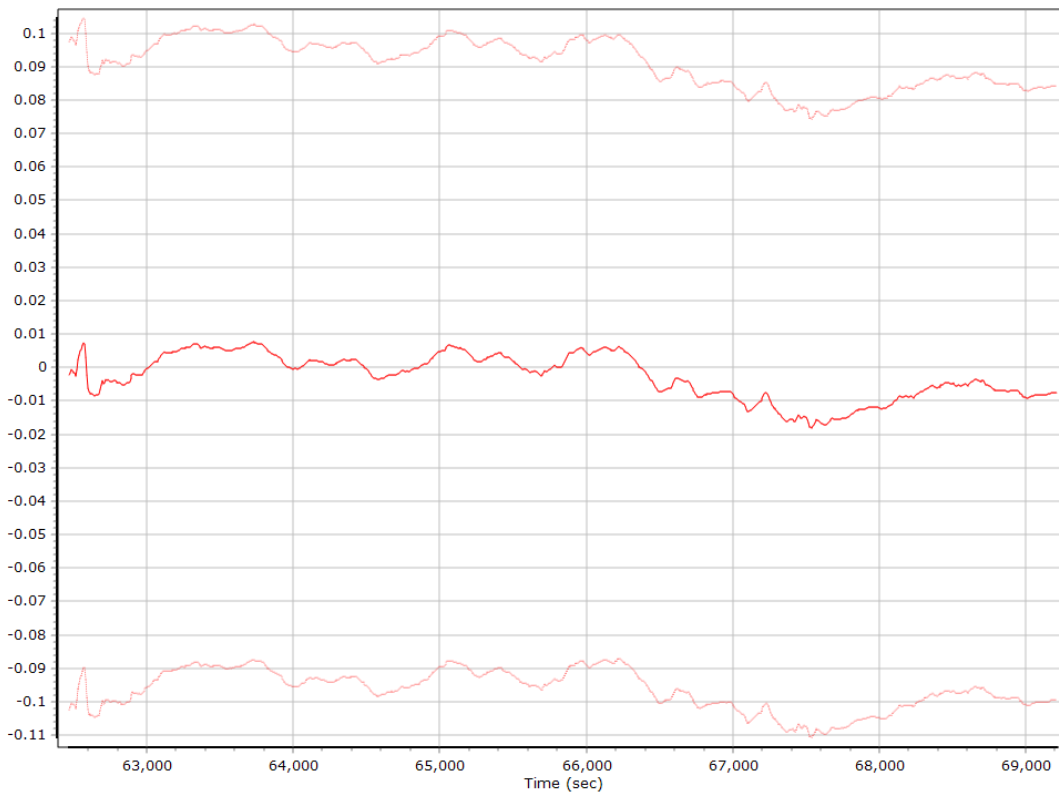
Z Accelerometer Scale Error (ppm)



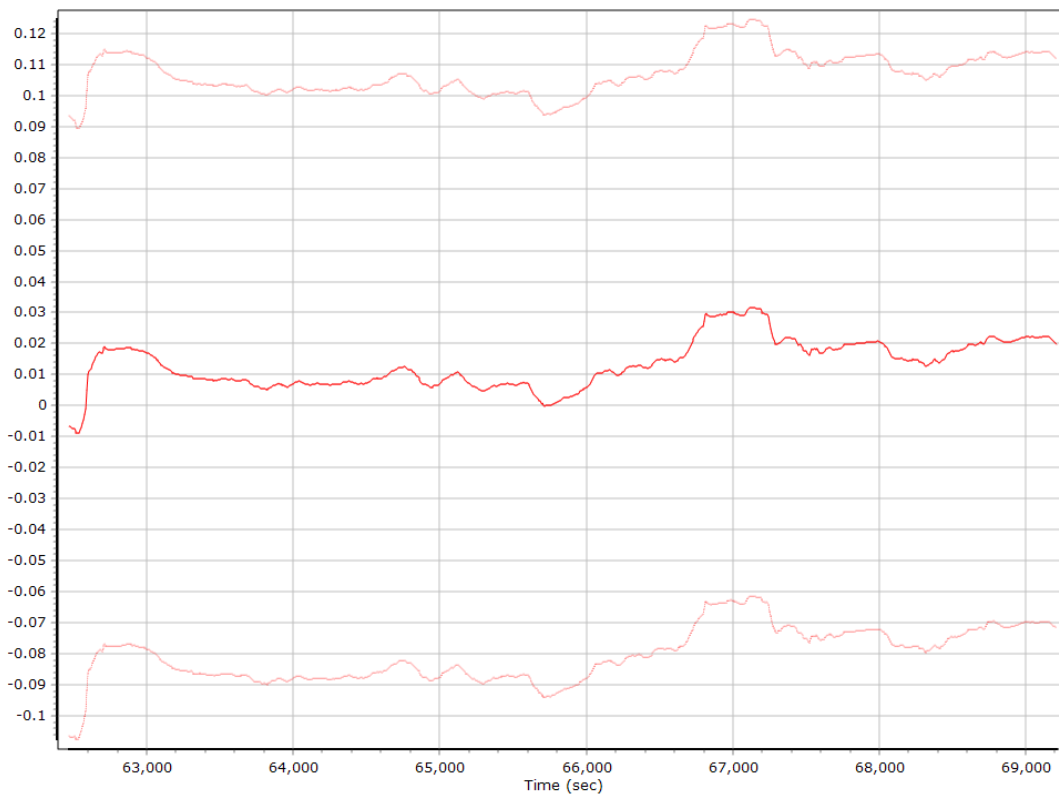
Gyro Bias (deg/h)



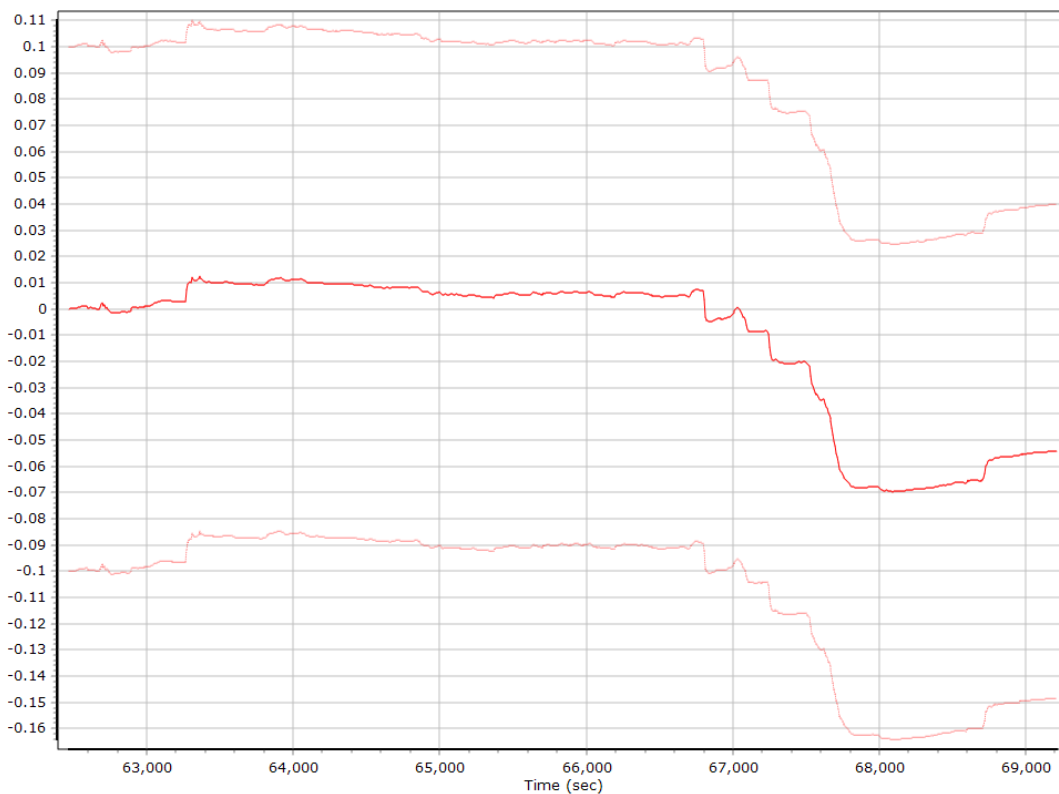
X Gyro Bias (deg/h)



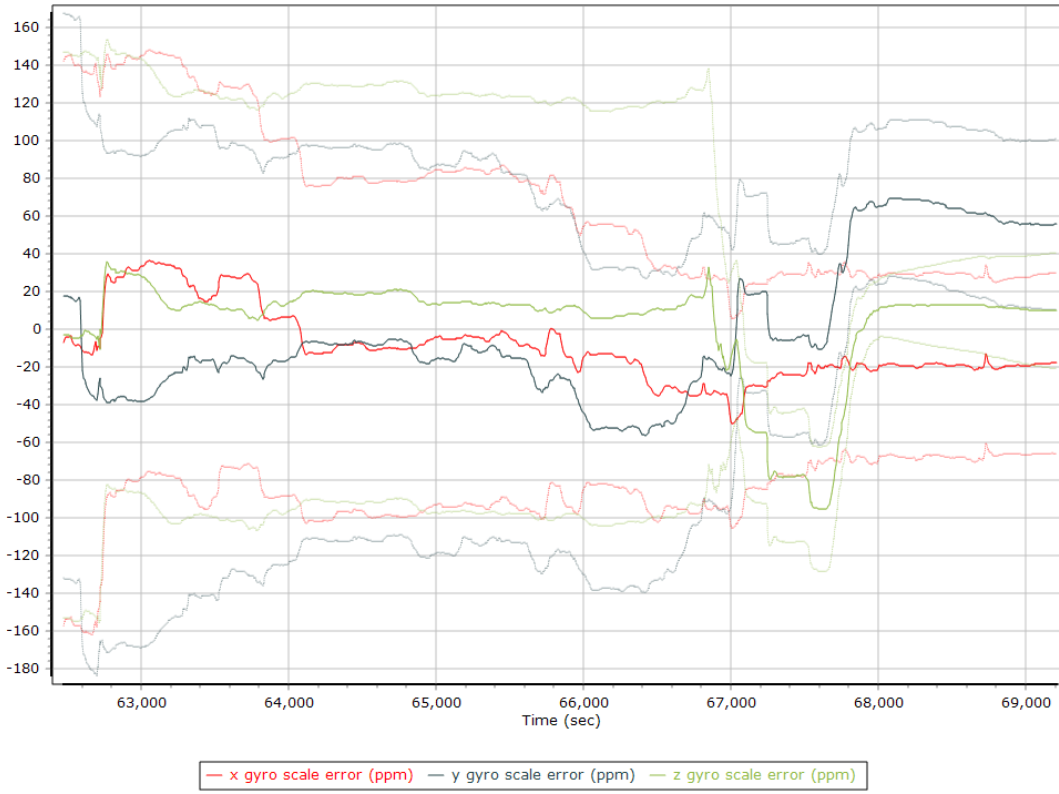
Y Gyro Bias (deg/h)



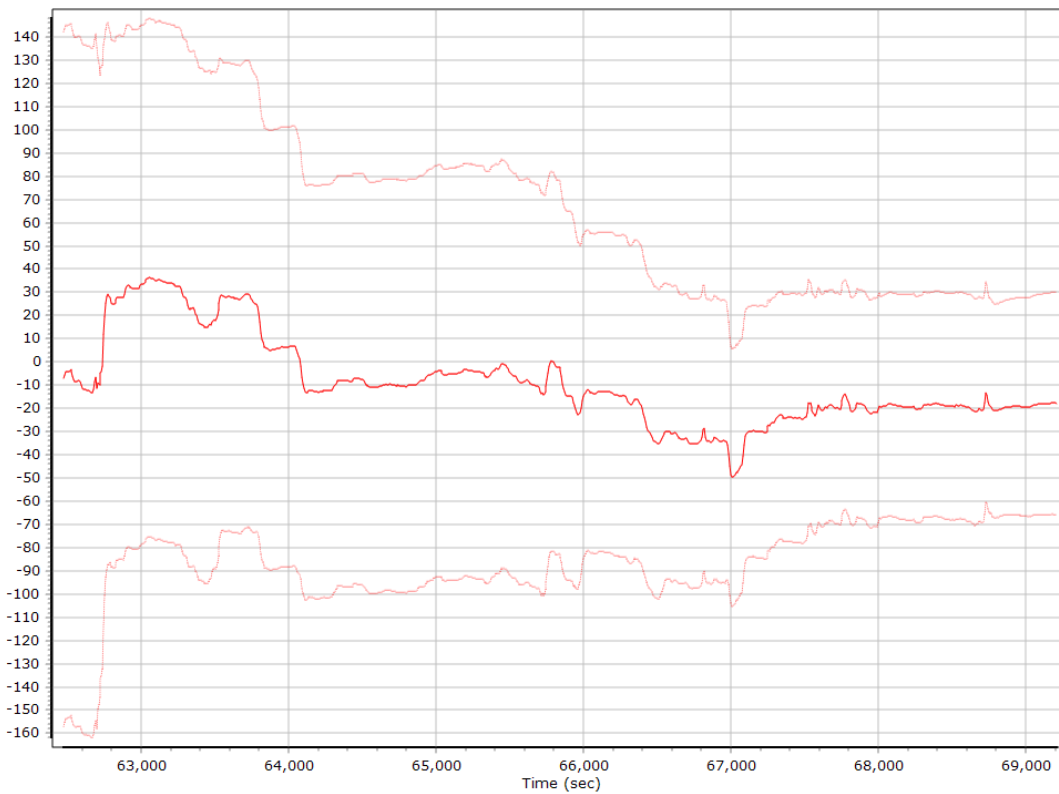
Z Gyro Bias (deg/h)



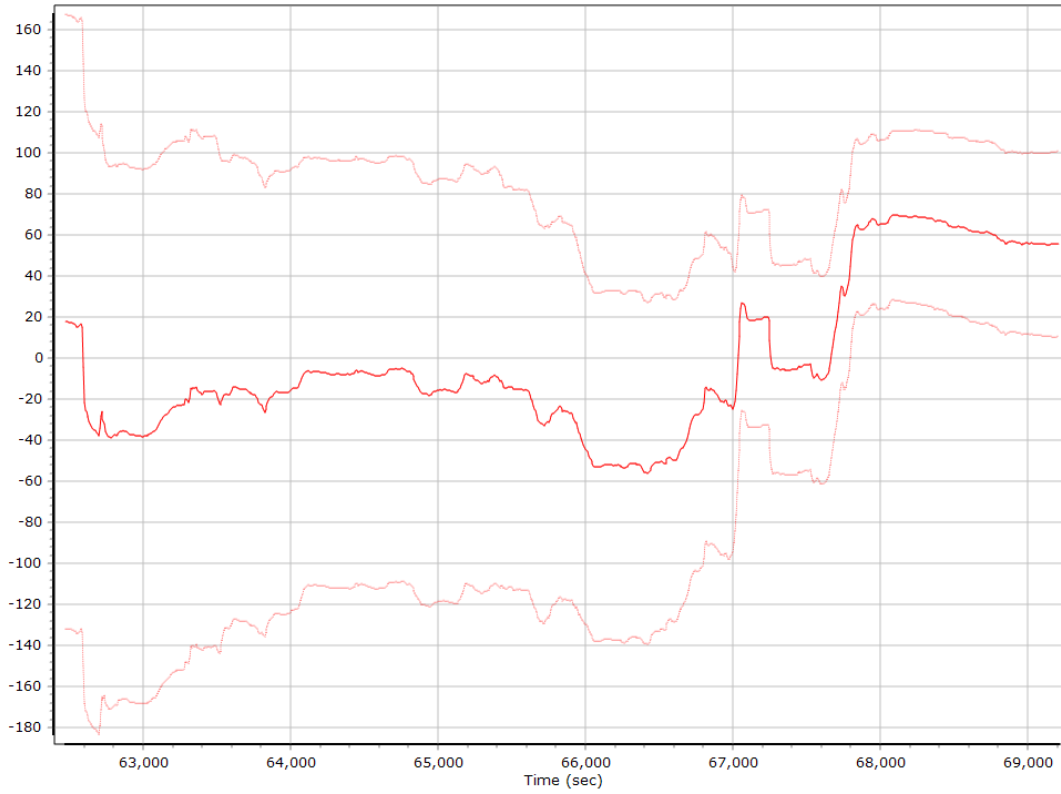
Gyro Scale Error (ppm)



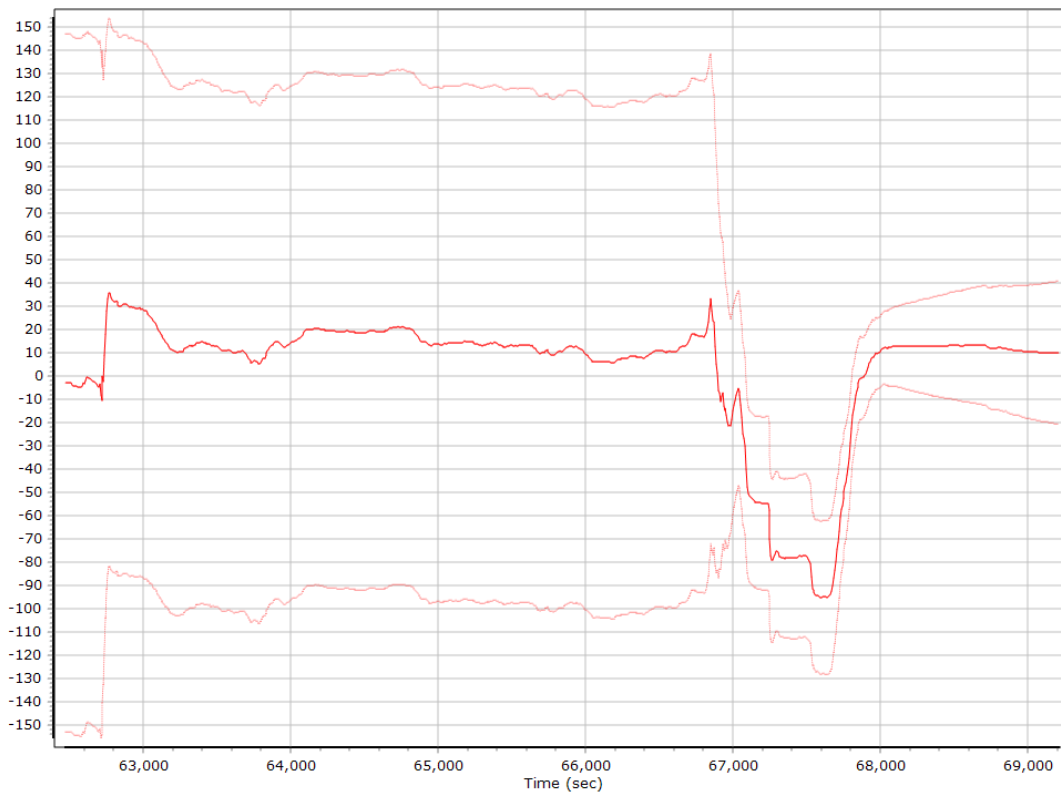
X Gyro Scale Error (ppm)



Y Gyro Scale Error (ppm)

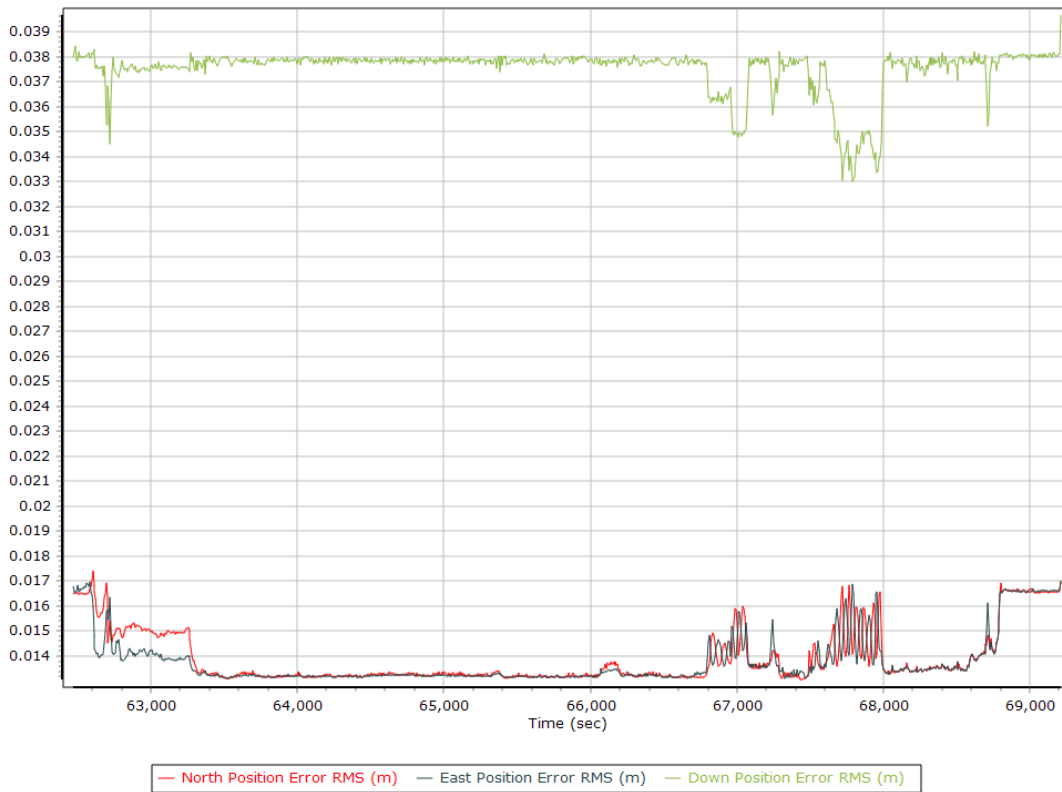


Z Gyro Scale Error (ppm)

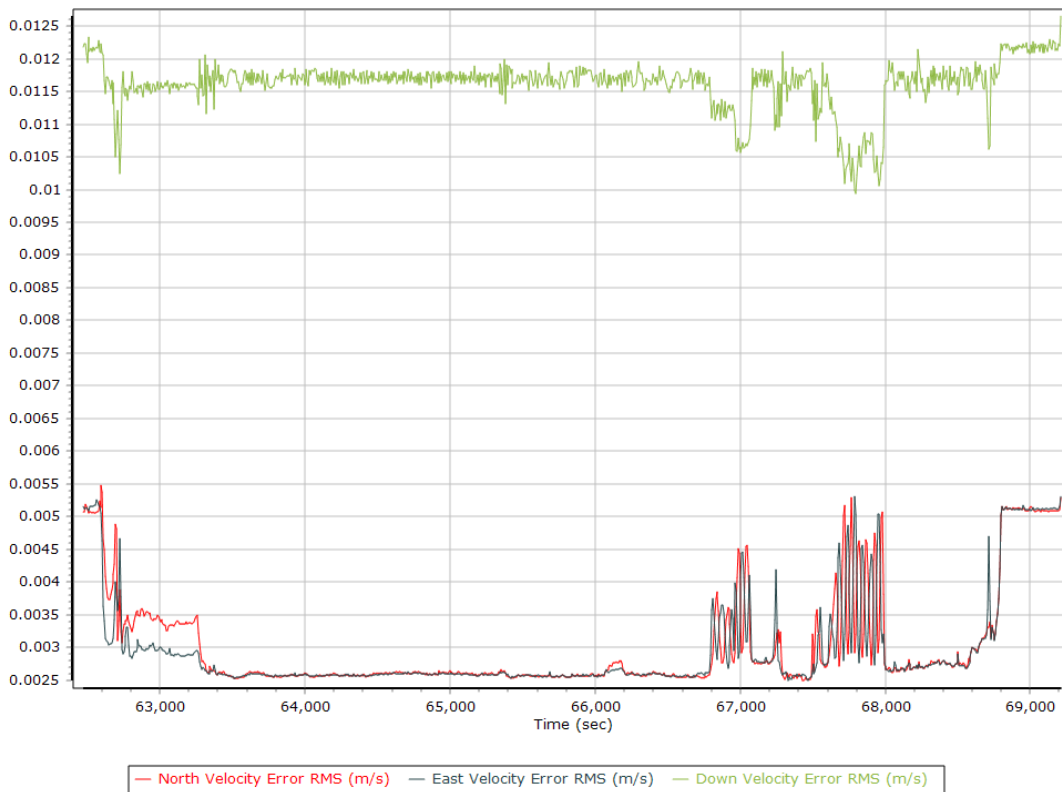


Smoothed Performance Metrics

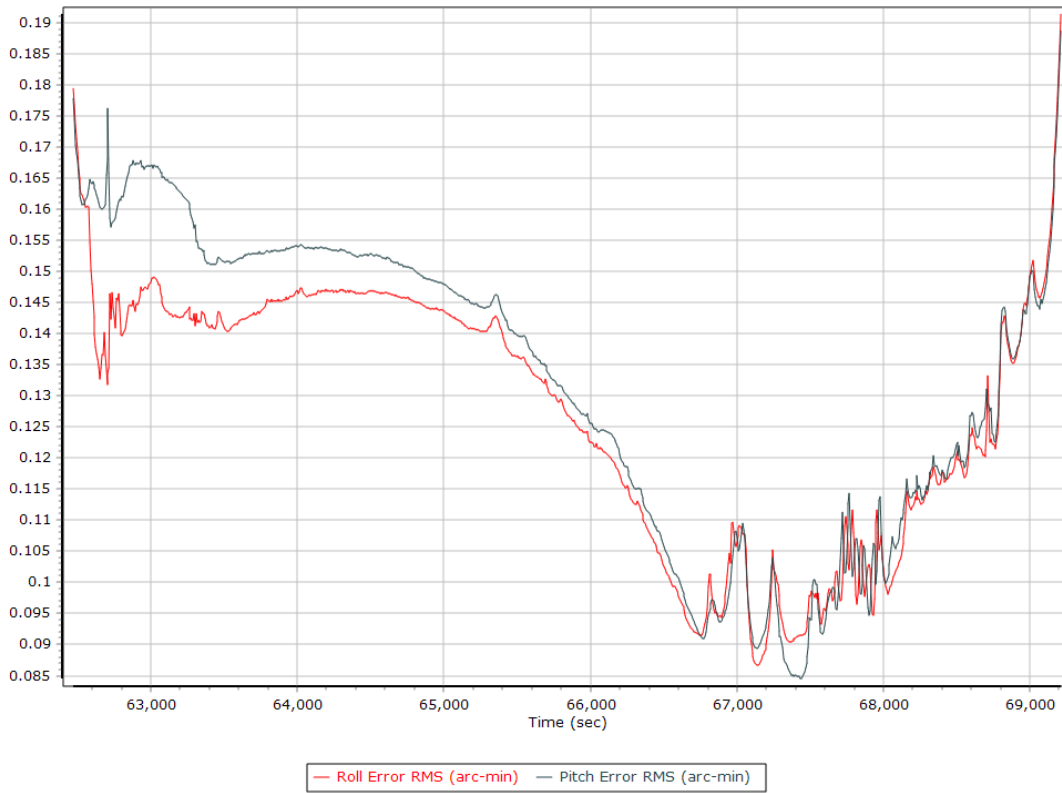
Position Error RMS (m)



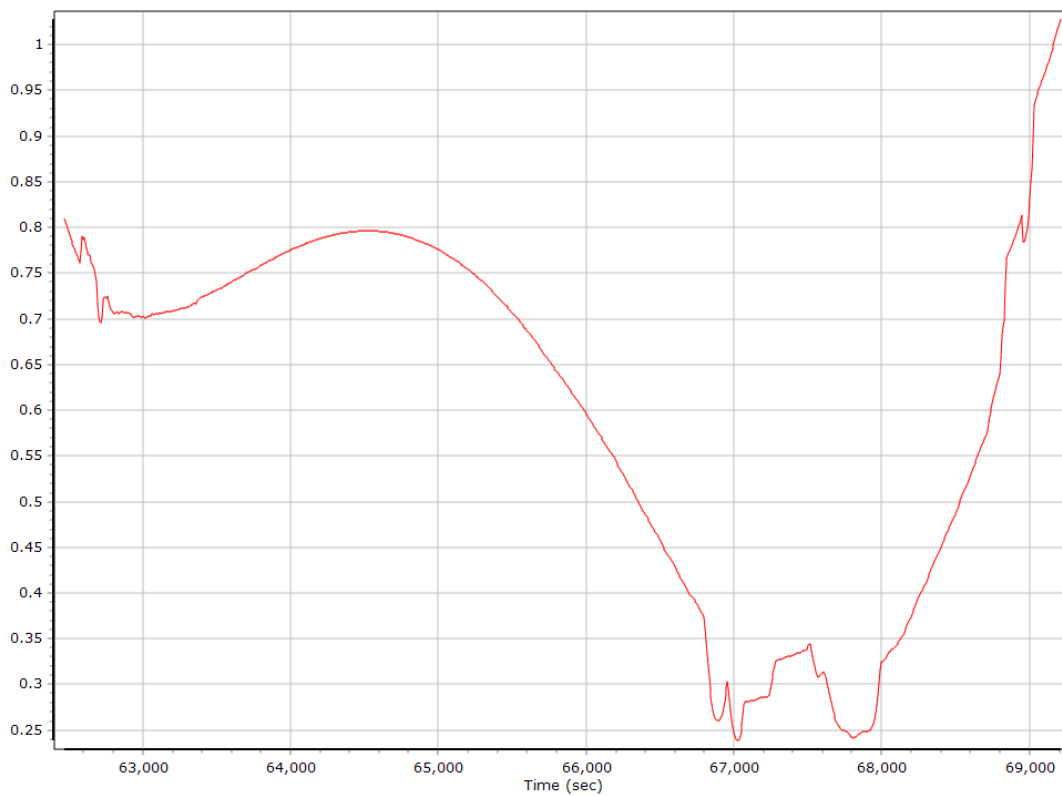
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

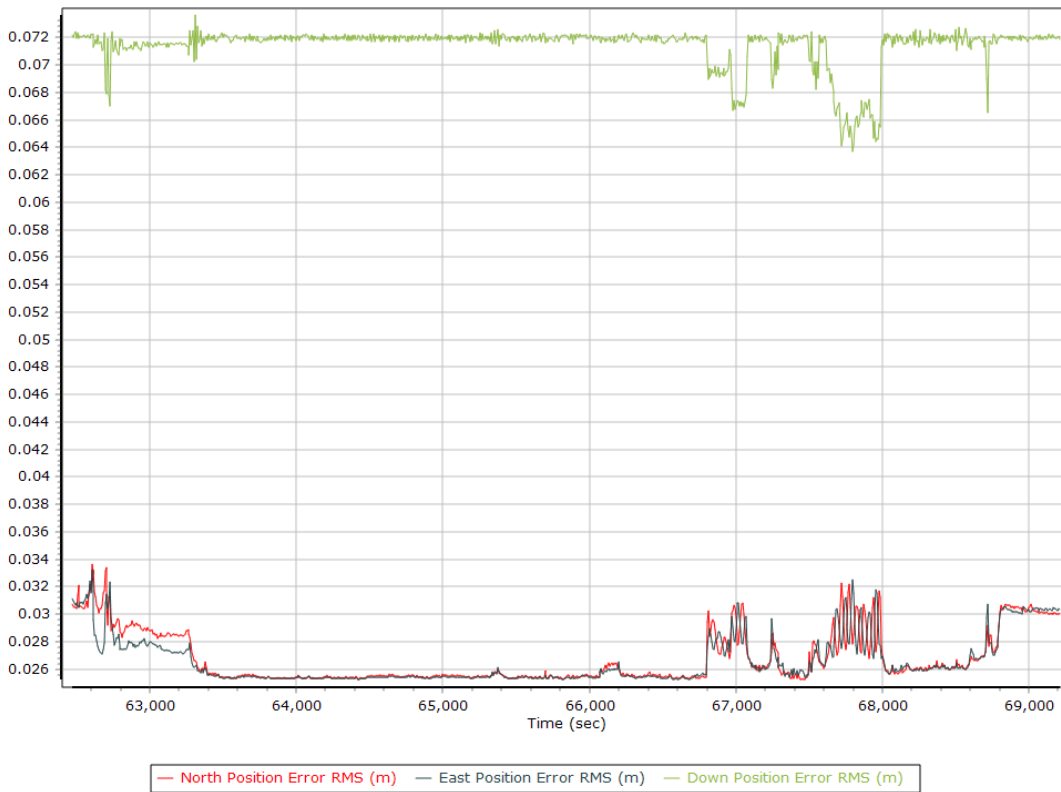


Heading Error RMS (arc-min)

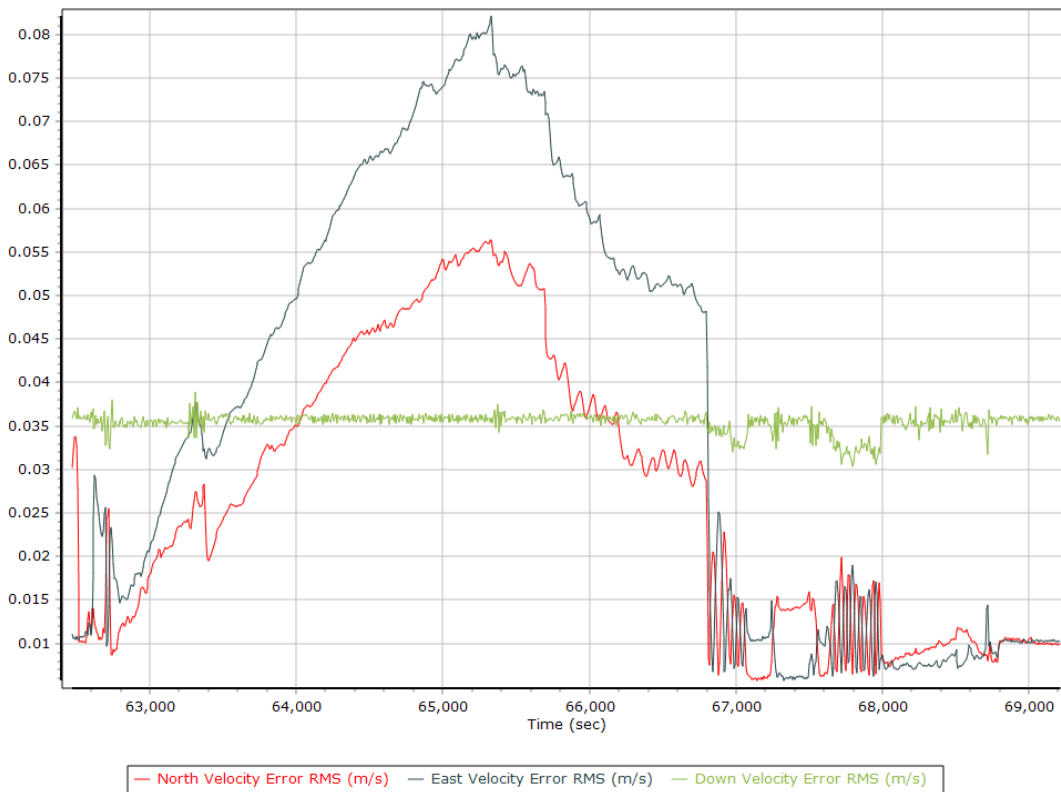


Forward Processed Performance Metrics

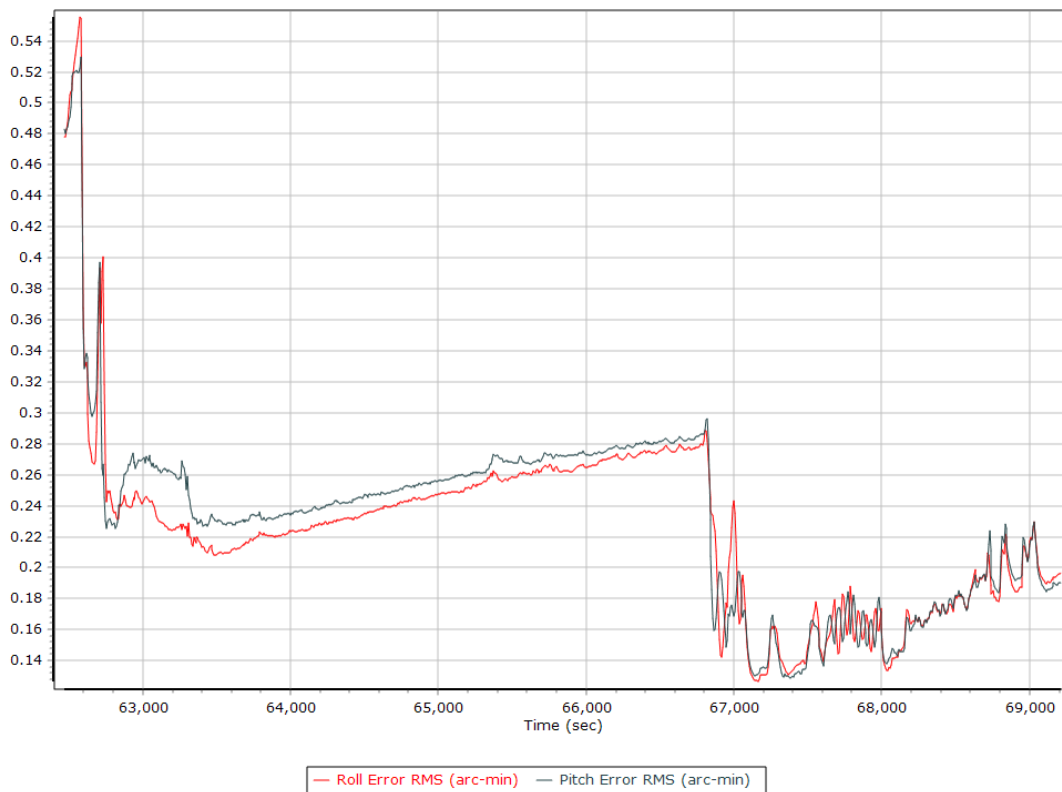
Position Error RMS (m)



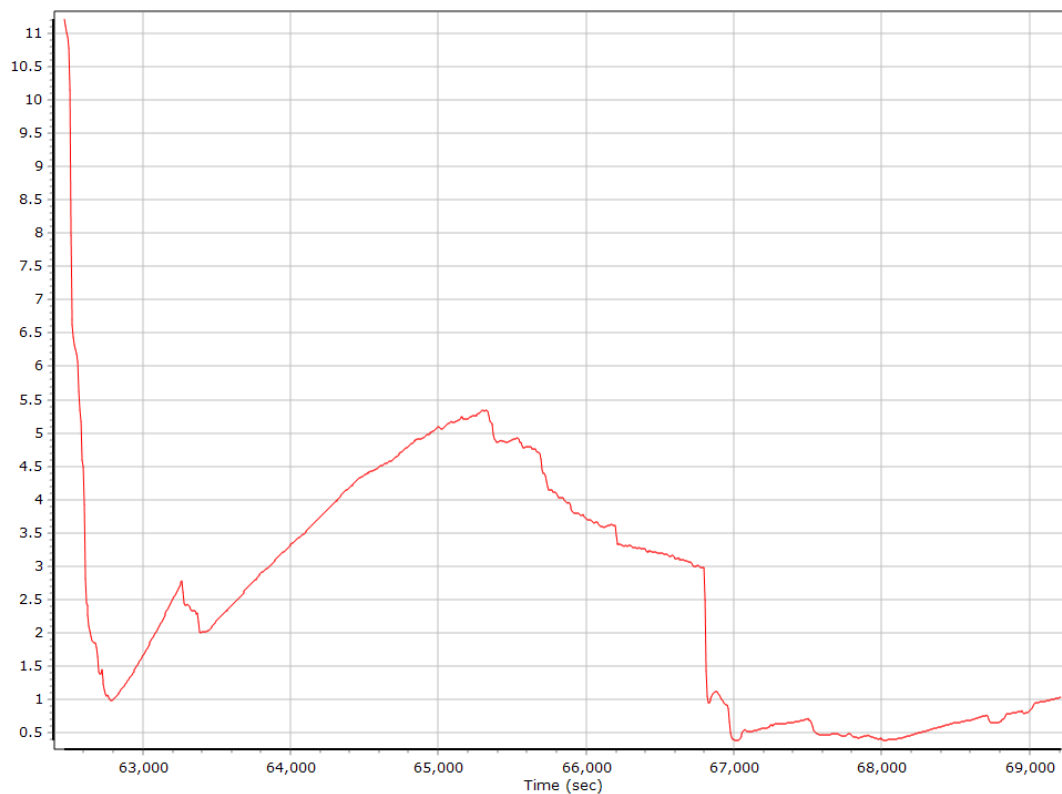
Velocity Error RMS (m/s)



Roll/Pitch Error RMS (arc-min)

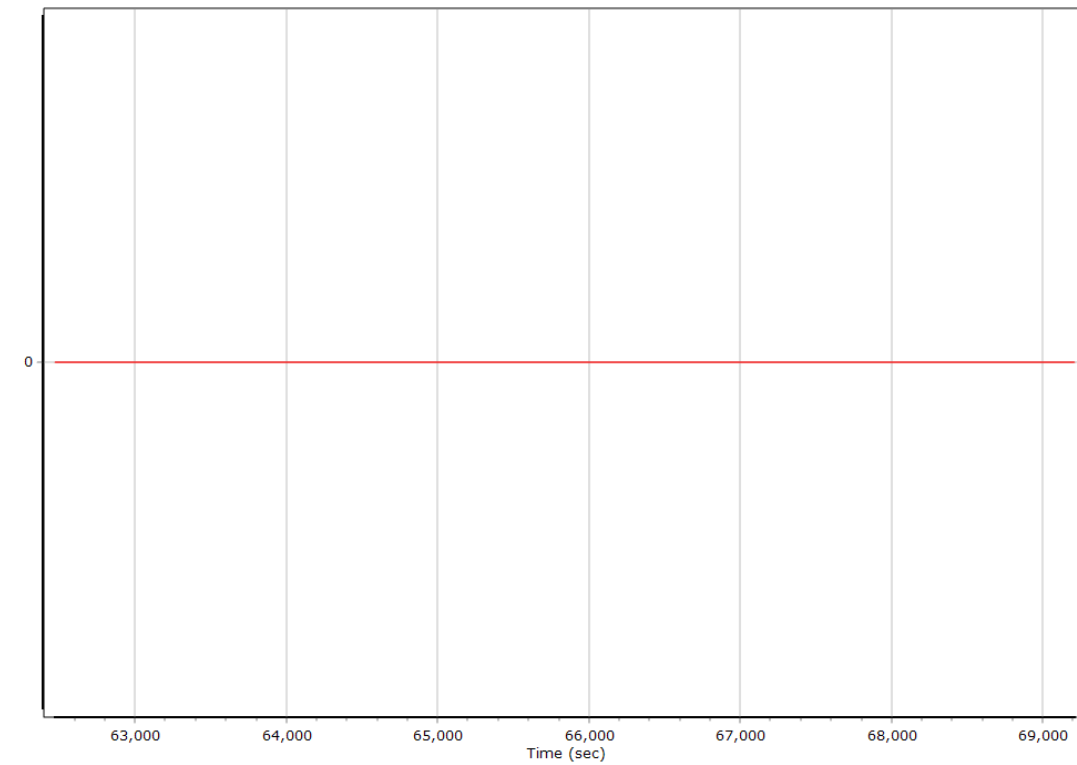


Heading Error RMS (arc-min)



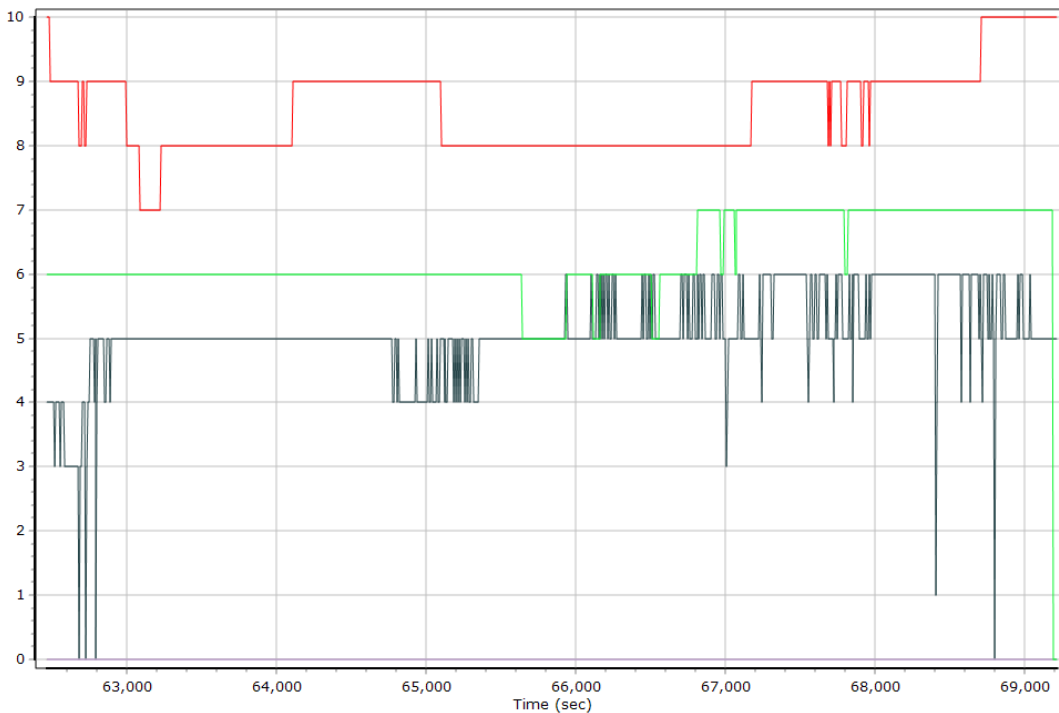
Forward Processed Solution Status

Processing Mode



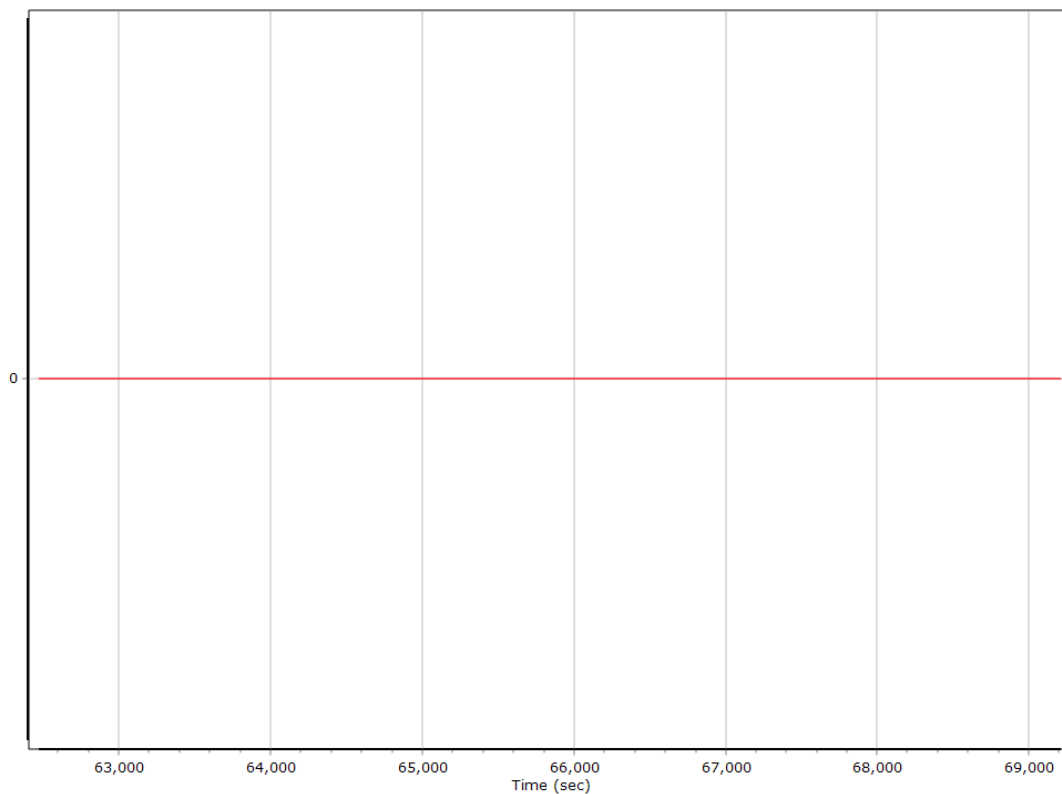
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav, 8 = DR

Number of Satellites



— Number of GPS Satellites
 — Number of GLONASS Satellites
 — Number of QZSS Satellites
— Number of BEIDOU Satellites
 — Number of GALILEO Satellites

Baseline Length



Export Summary Section 1

Export file	sbet_15316_NAD83(2011).out		
Export format	Custom Smoothed BET		
Solution in use	Post-processed		
Output rate	All Records		
Reference to Output lever arm (m)	0.000	0.000	0.000
Reference mounting angles (deg)	0.000	0.000	0.000
Output units (Coordinate / Lat & Lon)	Meter	Meter	
Export start time	62411.005 (09/18/2022 17:20:11)		
Export end time	69217.001 (09/18/2022 19:13:37)		
Height option	Ellipsoid Height		
WGS84 height flag	False		
Grid			
Zone			
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation			
Target Epoch	2010		

EO Summary Section 1

EO file			
EO format	ZI Imaging		
Lever arm (m)	0.000	0.000	0.000
Boresight angles (arcmin)	0.0000	0.0000	0.0000
Output rate	All Records		
Rotation sequence	x omega	y phi	z kappa
Local shift (m)	0.000	0.000	0.000
Output units (coordinate / angle / lat & lon)	Meter	Degree	Deg Decimal
Height option	Ellipsoid Height		
WGS84 height flag	False		
Scale height option	False		
Kappa cardinal rotation (deg)	0		
Solution in use	Post-processed		
EO start time	62411.005 (09/18/2022 17:20:11)		
EO end time	69217.001 (09/18/2022 19:13:37)		
Grid	Universal Transverse Mercator		
Zone	UTM North 15 (96W to 90W)		
Datum	NAD83 (2011)		
Ellipsoid	GRS 1980		
Local Transformation	NONE		
Target Epoch	2010		